



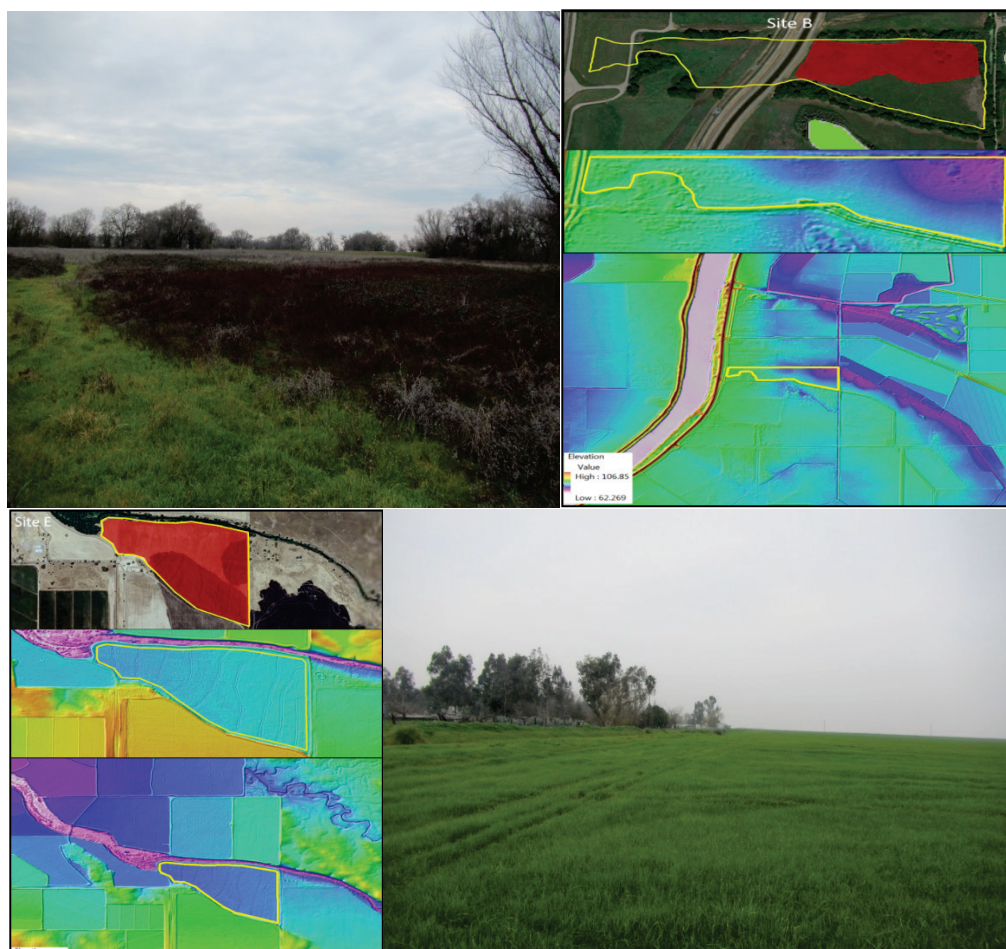
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Identifying Areas of Potential Wetland Hydrology in Irrigated Croplands Using Aerial Image Interpretation and Analysis of Rainfall Normality

Jacob F. Berkowitz, Jason Pietroski, and Daniel Krenz

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Identifying Areas of Potential Wetland Hydrology in Irrigated Croplands Using Aerial Image Interpretation and Analysis of Rainfall Normality

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Final report

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Abstract

The following report provides a framework for evaluating areas with potential wetland hydrology in irrigated and formerly irrigated croplands. The document is designed to provide insight into the complexity of identifying irrigated wetlands and to support current U.S. Army Corps of Engineers (USACE) guidance. Additionally, the analysis conducted helps to identify and refine areas that can be targeted for future investigation, including the installation of on-site groundwater monitoring equipment. The information herein supports and supplements current approaches and is not intended to replace or supersede current USACE national, division, or district level guidance for making wetland determinations in irrigated croplands. The procedures in this document should not be the sole basis for making wetland determinations for the purposes of the Clean Water Act; rather, these procedures are intended to supplement existing guidance and provide supporting information for making wetland determinations.

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Preface

This study was conducted for the Wetlands Regulatory Assistance Program. The project manager was Sally Stroupe. The work was performed by Dr. Jacob F. Berkowitz and Jason Pietroski (Wetlands and Coastal Ecology Branch, Patty Tolley Tuminello, Chief), U.S. Army Engineer Research and Development Center, Environmental Laboratory (ERDC-EL), and Daniel Krenz (Regulatory Branch, William T. Walker, Chief), U.S. Army Corps of Engineers, Norfolk District.

Tosin Sekoni, Kevin Philley (USACE-ERDC), William Ness, and James Robb (USACE Sacramento District), Wade Eakle, Thomas Cavanaugh (USACE South Pacific Division), and David Olsen (USACE Headquarters) provided valuable comments to this document. Michael Finan was instrumental in the development of this project, providing mentorship and a wealth of knowledge; he also expanded understanding of wetland resources in the region. Funding was provided by the USACE Wetland Regulatory Assistance Program.

At the time of publication, Mark Farr was Chief of the Ecological Engineering Division of ERDC-EL; Dr. Al Cofrancesco was the Technical Director. The Deputy Director of ERDC-EL was Dr. Jack Davis, and the Director was Dr. Beth Fleming.

COL Bryan S. Green was Commander of ERDC; Dr. Jeffery P. Holland was the Director.

1 Introduction

Irrigation has been practiced in the western United States for more than 125 years, effecting natural hydrologic regimes over large areas. When practiced over many years, the application of irrigation water can alter vegetation and soil characteristics (e.g., color, redox features, and salt content) of affected areas (Ekstein and Hygnstrom 1996; Sueltenfuss et al. 2013; Kendy and Bredehoeft 2006; Strange et al. 1999). Long-term irrigation of pastures and crops, and overflow of excess irrigation water into adjacent areas, have created or supported wetlands and altered pre-existing wetlands throughout the region (Summerford 2009). Wetlands identified for the purposes of the Clean Water Act generally do not extend to irrigation-induced wetlands that would not persist following discontinuation of water application, but it remains difficult nonetheless to distinguish wetlands that would persist from those relying solely on irrigation under normal circumstances. Limited data exist from which to develop technical guidance to aid in the identification of irrigated wetlands (Berkowitz and Evans 2014). Furthermore, the scope and geographic extent of irrigated-wetland problems remain poorly defined but may affect at least eight Corps districts in the western United States.

Both the *USACE Wetland Delineation Manual* and associated regional supplements provide guidance on conducting wetland determinations in disturbed and problematic areas, including in irrigated agricultural areas (Environmental Laboratory 1987; USACE 2008). Further, in 2012, the USACE South Pacific Division (SPD) released additional guidelines encouraging landowners to discontinue application of irrigation inputs for one or more years, allowing for examination of wetland hydrology in the absence of water additions (USACE 2012). This approach may prove to be impractical in some cases and potentially result in delays in making determinations of jurisdiction and permit decisions. As such, completing wetland delineations on irrigated lands poses a continuing challenge. The methods described here provide a means to arrive at a defensible wetland delineation boundary based on available data sources including direct observations of hydrology, soils and vegetation as well as interpretation of aerial images and other offsite tools (e.g., GIS layers, LiDAR).

This technical report provides a framework and examples of 1) interpretation of aerial images in irrigated and formerly irrigated agricultural areas and 2) analysis of rainfall normality using the Direct Antecedent Rainfall Analysis Approach. Application of LiDAR and other tools are also discussed. These approaches can aid in the identification of potential wetland features across the irrigated landscape and direct future research investigating the temporal and spatial extent of wetlands occurring in the absence of irrigation water inputs.

2 Methods

2.1 Site Selection

In February 2015, a wide range of potential study sites were visited by staff from the Engineering Research and Developmental Center (ERDC) and SPD along with local land managers. A subset of these sites (Table 1) were identified for further analysis after a review of available historical aerial images; identification was based upon signatures indicating the potential presence of wetland hydrology. Study locations occurred in agricultural areas north of Sacramento, CA. All sites were located within Major Land Resource Area 17 - Sacramento and San Joaquin Valleys of Land Resource Region C - California Subtropical Fruit, Truck, and Specialty Crop Region (USDA-NRCS 2006).

Table 1. Designation, location, land use history, size, and elevation of sites identified for aerial image analysis north of Sacramento, CA.

SITE NAME	COUNTY	PRIOR LAND USE	AREA (acres)	AVG ELEVATION (feet)
Site A	Sacramento	Laser-level rice	13.0	16
Site B	Sacramento	Laser-level rice	23.2	21
Site C	Sacramento	Laser-level rice	16.5	21
Site D	Sacramento	Abandoned contour rice	30.8	17
Site E	Placer	Former laser-level rice converted to pasture	55.6	74
Site F	Placer	Laser-level rice	28.9	77
Site G	Placer	Laser-level rice	14.0	90

The average annual precipitation is 5 to 12 in. (125 to 305 mm) in the San Joaquin Valley. The average annual precipitation ranges from 12 to 30 in. (305 to 760 mm) in most of the Sacramento Valley. Summers are long, hot, and dry, and winters are cool and rainy. Most of the rainfall occurs at low or moderate intensity, with Pacific frontal storms occurring from October to May. The average annual temperature is 59 to 67 degrees F (15 to 20 degrees C), decreasing from south to north. Lower elevation portions of the valley experience a year-round growing season with soil temperatures remaining above 5°C.

2.2 Analysis of Aerial Images

Aerial imagery is a useful tool for evaluating potential wetland features, especially in disturbed and problematic areas (USACE 2008). Image interpretation represents a valuable resource utilized by the U.S. Fish and Wildlife Service National Wetland Inventory Mapping program (USFWS 2014), USACE, U. S. Department of Agriculture - Natural Resource Conservation Service (USDA-NRCS), and other federal and state agencies. The USDA-NRCS (1997), Minnesota Board of Soil and Water Resources (MN BSWR 2010), and others provide additional guidance on interpreting aerial images for determining the presence and extent of potential wetland features.

In the current study, aerial images were examined between the years of 1993 and 2014. Features or aerial signatures that may indicate potential wetland hydrology were identified and measured in each aerial image available. The basis for this interpretation involved looking at vegetation presence, color, vigor, and other factors in the context of the time of year and ongoing irrigation practices. Potential wetland hydrologic features were compared with nearby agricultural and wetland locations to aid in verification and analysis of results. The most commonly observed potential indicators of wetland hydrology identified included 1) areas consistently excluded from cropping, 2) surface water/saturation, 3) shifts in vegetation, 4) areas of crop stress, and 5) other discolored areas located within the approximate footprint of hydrology signatures observed in prior years.

Care must be used in interpreting imagery because wetness signatures may be present on a non-wetland site immediately after a heavy rain or during periods of unusually high precipitation, runoff, tides, or river stages (USACE 2008). Alternatively, signatures may be absent from a wetland during the normal dry season or during extended periods of drought. Other factors (e.g., pesticide application, fires) can also lead to crop stress or changes in site coloration. As a result, it is recommended that multiple years of imagery be evaluated for the repeated occurrence of potential wetness signatures. Additionally, analysis of rainfall normality (discussed below) can be used to select images for evaluation.

Figure 1 depicts how a feature can be tracked from year to year. This method is similar to the method outlined in technical guidance from the MN BWSR (2010), USACE (2008), and USDA-NRCS (1997). These documents provide guidance and describe a variety of potential wetness

signatures that can be detected on aerial images, including crop stress, areas of a cropped field that appear to be drowned out, areas not cropped or excluded from normal cropping, standing water, a wetland signature or shift in vegetation, and altered patterns in cropping practices.

Figure 1. Time series photos depicting a potential wetland hydrology signature that can be detected from year to year. Note that the feature persists while exhibiting different color patterns, depending on the season and resolution of the image.



Each available image was analyzed and reviewed for areas of discoloration or other indicators as described above. Areas of interest were outlined using polygon tools and labeled with the month and year of the image in order to estimate the area of the feature and track the feature from year to year. While not all discolorations provide evidence of a vegetation shift, soil saturation, or other potential wetland signature, it is possible to find consistent signature patterns on the landscape by comparing multiple images collected over time. This data was summarized in a table recording the year and month of the image, study area (acres), potential wetland signature (acres), rainfall normality (discussed below), and an interpretation of the signature (Table 4). All aerial images evaluated are presented in Appendix A. Current guidance suggests that hydrology determinations and delineations should be conducted in the normal wet period of a region whenever possible (USACE 2008). For the study area, the normal wet period is generally December, January, February, March, and April (USDA-NRCS 2006; USACE 2012).

2.3 Analysis of Rainfall Normality

Analysis of rainfall normality is an essential tool for determining when wetland hydrology can be expected to occur, with regard to both on-site and off-site data analysis and interpretation. Sprecher and Warne (2000)

provide an overview of collecting, analyzing, and interpreting meteorological data and should be examined for more comprehensive background information than that contained herein. Precipitation data was evaluated through the application of the Direct Antecedent Rainfall Evaluation Method (DAREM) (Sumner et al. 2009). The DAREM method examines rainfall patterns during the previous three months to determine if the aerial image collection occurred during a period of normal, above normal, or below normal rainfall. Rainfall normality evaluations examine the 30th and 70th percentile averages based on long-term (e.g., 30-year) average precipitation records provided in WETS tables developed by the USDA-NRCS National Water and Climate Center (Berkowitz and Noble 2015). Monthly rainfall totals are compared with the 30th and 70th percentiles and assigned a value based on drier-than-normal (1), normal (2), or wetter-than-normal (3) conditions. Values are weighted based on the most recent month's data; then the weighted values are totaled for a cumulative score that is used to describe whether the prior three-month period of precipitation was drier than normal (6-9), normal (10-14), wetter than normal (15-18; Table 2). The DAREM analysis approach has been utilized in a number of studies examining wetland factors, including hydrology and hydric soil determinations and is recommended for interpreting wetland hydrologic data for USACE wetland delineation (USACE 2005; Berkowitz et al. 2014; Berkowitz and Noble 2015).

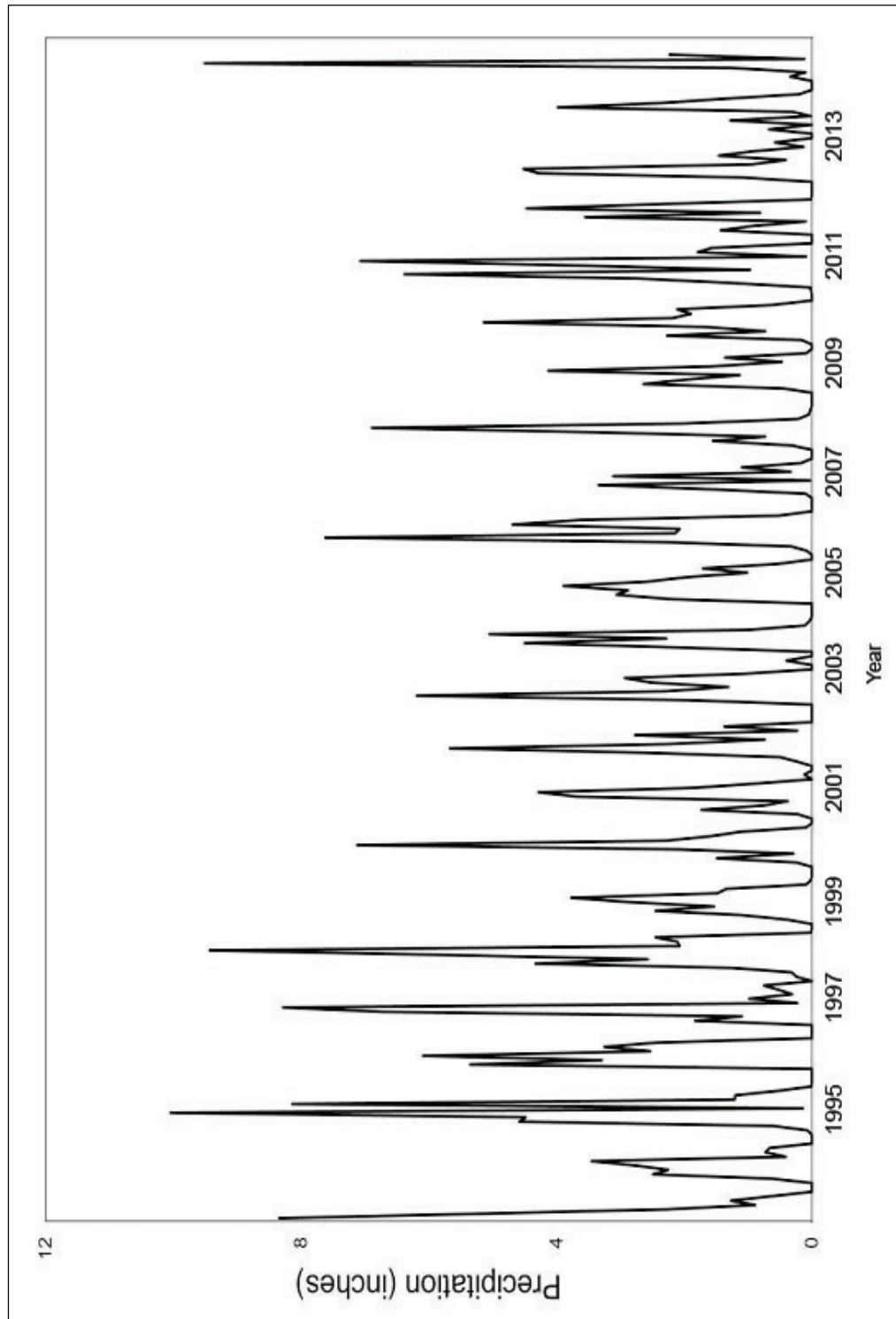
Table 2. Example depicting the Direct Antecedent Rainfall Evaluation Method (DAREM) analysis to evaluate rainfall normality. In this example, rainfall normality is assessed for February 2015 by examining the three prior months and their relative wetness as compared with long-term, 30-year averages.

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	Ratings
3rd	Nov	1.06	3.15	1.25	Normal	2	1	2		Dry = 6-9
2nd	Dec	1.00	3.54	9.51	Wet	3	2	6		Normal = 10-14
most recent	Jan	1.90	4.75	0.12	Dry	1	3	3		Wet = 15-18
Month examined	Feb						Total	11	NORMAL	

Rainfall normality calculations were conducted for each month between April 1993 and March 2015, representing the period when aerial images and rainfall data were available. Rainfall normality was used to determine if areas of potential wetland hydrology seen in historical aerial images occurred during normal, drier-than-normal, or wetter-than-normal

conditions. Rainfall normality was determined using precipitation data obtained from the Nicolaus 2 Climate Station in southern Sutter County at approximately 43 ft in elevation. The Nicolaus 2 Climate Station is located within the single large Natomas Basin geomorphic feature containing all study sites, providing a useful basis for analysis of rainfall normality. This is the station located proximate to Sites E, F, and G. Figure 2 shows rainfall trends during the 21-year period of this study (1993- 2014). Each spike in the graph represents the height of the wet season each year, with most rainfall occurring in December or January. The precipitation data and the calculations as described above are summarized in Table 4. All available rainfall analysis data is presented in Appendix C.

Figure 2. Monthly rainfall observations between 1993 and 2015. Note the repeating pattern of peaks, indicating the wet portion of each year, followed by a sharp decline into the dry season.



3 Results

3.1 Aerial Image Interpretation

The analysis of potential wetland hydrology signatures observed at each study site are examined and discussed below. The evaluation includes a discussion of changes in land use patterns, identification of potential hydrology signatures, resolution of available images, presence of wetlands as identified using NWI, and other factors. It should be noted that, although imagery interpretation provides a useful tool for evaluating potential wetland areas, image analysis is not an adequate substitute for a field investigation and the information gathered should be verified in the field.

Site A

Site A displayed potential wetland signatures in multiple months between 2011-2014. During this period, this site was not actively farmed and there was no evidence that irrigation of adjacent fields was a contributing factor to areas of potential wetland hydrology. Some of these signatures occurred as a darkened area, indicative of a shift in vegetation and prolonged vegetative growth extending into the early portion of the dry season during non-irrigated years. Prior to 2011, Site A was actively farmed and the presence of crops often obscured any potential wetland signatures. Additionally, early images often displayed poor resolution and identifying distinguishing characteristics remained difficult. However, several available images collected during the farmed period display areas of surface saturation and open water (Figure 3). Just south of Site A, a wetland mapped on the National Wetland Inventory (NWI) data layer was identified and showed similar discoloration as that observed within the examined polygon.

Figure 3. Image of Site A. The highlighted area displays evidence of a shift in vegetation, indicating potential soil saturation.



Site B

Site B exhibited dark signatures, indicating soil saturation or surface water and a shift in vegetation within a portion of the study area (Figure 4). The area of potential wetland hydrology, located in the northeast corner of the site, remained excluded from cropping during years of active irrigation and farming. This feature varies in size from year to year but is always present. This wetness feature was visible in the earliest years examined when the entire study area was cropped. A darker signature within the footprint of this feature in the June 1993 image suggests that there may have been soil saturation uncharacteristic of the rest of the site. Site B is directly west of a mapped NWI wetland and north of another NWI wetland.

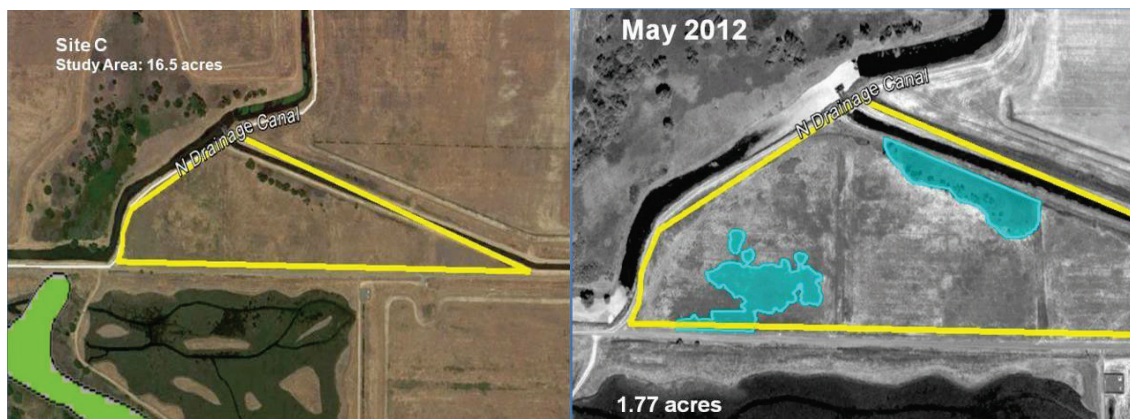
Figure 4. Image depicting Site B in an uncropped condition (left; image from April 2014). Note the presence of discoloration in the northeast corner of the study area (top image). The 2002 image (right) depicts the study area while under cropping; the highlighted area outlines the potential wetland hydrology signature. Similar shifts in vegetation color and growth patterns were observed within the study area and the persistent NWI mapped wetland feature south of Site B.



Site C

Potential wetland signatures were observed in two locations within the study area (Figure 5). The most consistent potential wetland signature was observed adjacent to a ditch that marks the northern boundary of the study area. This feature persisted throughout available images, displaying a clear vegetation shift that remains visible during periods with and without evidence of irrigation. During periods when the study area was actively farmed, this portion of Site C was excluded from cropping. A second area also displays a potential wetland signature in most of the available images collected between 2007 and 2014. These signatures occur as enhanced vegetation growth patterns continuing into the beginning of the dry season with no apparent connection irrigation. The shifts in vegetation remain consistent from year to year. Prior to 2007, this site was actively farmed with irrigation inputs occurring during the dry season.

Figure 5. Image depicting Site B in an uncropped condition (left; image from July 2014). Note the presence of an NWI mapped wetland south of the study area and the shift in vegetation occurring along the northern border of Site C. The 2012 image (right) highlights the two areas depicting persistent areas with potential wetland hydrology signatures. A wetland restoration area has been established to the south of the study area.

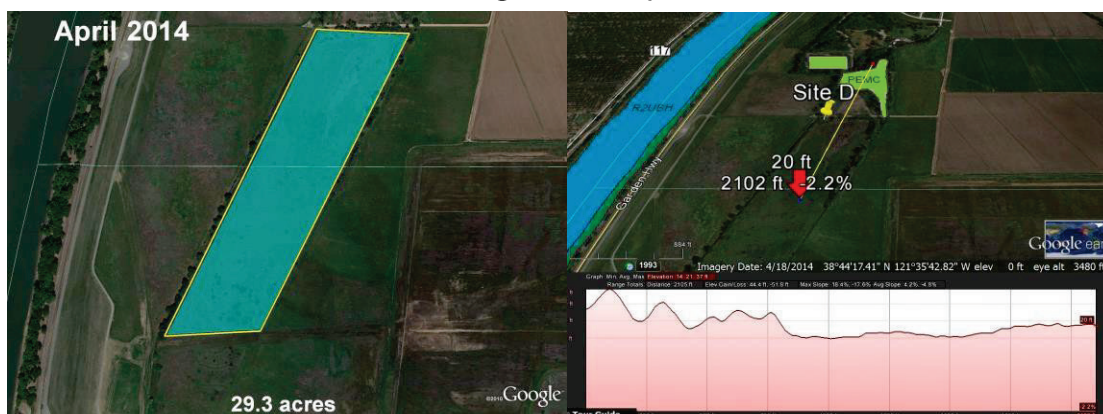


Site D

Site D was a former contour rice field with a system of checks that have been breached in recent years (Figure 6). Potential wetland signatures were observed throughout the entire site. When comparing this study area with surrounding fields in years when no evidence of irrigation is present, a large portion of this site displays dry season growth. A shift in the vegetative community was noted on the northern end of the study area in some images, and persisted for many of the months with available data from 2007-2014. Prior to 2007, this site was being actively cropped and potential wetland hydrology signatures were not readily distinguishable. Unlike

several of the other study areas examined where fields have been laser-leveled, Site D maintains some of its natural elevation and contour. This site is also located south and down-slope of an NWI wetland feature. An example of the use of elevation assessment is also presented in the figure. Similar tools are available in Arc GIS, Google Earth, and other sources.

Figure 6. Aerial image from 2014 highlighting areas of potential wetland hydrology (left). The image to the right demonstrates the use of elevation tools to enhance the user's understanding of the landscape. Use of these tools helps to put potential wetness signatures in landscape context during off-site analysis.



Site E

Site E contains large areas of potential wetland hydrology in a number of the available images (Figure 7). The identifiable features occurred between 2010 and 2014. A portion of the site burned in 2010. Widespread discoloration was present across the site in several images, showing sufficient evidence that potential wetland conditions recurred over multiple years starting in 2010. It is possible that larger portions of this site exhibit potential wetland hydrology earlier than 2010, but few photos were available during the normal wet portion of the year during that period.

Figure 7. Aerial image of Site E displaying discoloration due to burned areas (left) and a large area of potential wetland hydrology that persisted during 2010-2014 (right).



Site F

Site F contains areas with long-standing evidence of potential wetland hydrology (Figure 8). The site is divided into two sections; the northwestern part is routinely cropped and does not show evidence of potential wetland hydrology. The southeastern half in contrast consistently shows darker signatures, which may indicate soil saturation and does not appear to be cropped on a regular basis. This feature also shows dry season growth when there is no evidence of irrigation. This site is located southwest of an NWI wetland.

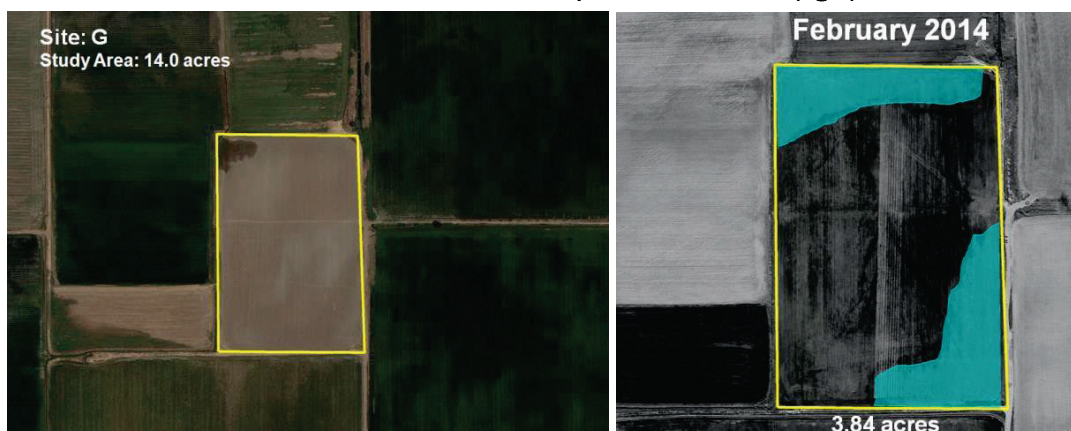
Figure 8. Aerial image of Site F displaying the persistent signature of potential wetland hydrology on the southeastern portion of the study area. Note the designated area displayed both darkening of the soil surface (left) and vegetative growth continuing into the dry portion of the year (right).



Site G

Site G showed evidence of potential wetlands hydrology for most months with available data from 2007-2014. The areas with persistent signatures of potential wetland hydrology consistently occurred in the northwest corner of the study area, and often expanded into the northern and southern portions of the site (Figure 9). In some years, a dark signature indicating a change in vegetative community was the distinguishing characteristic. In other years, this same feature appeared to show evidence of crop/vegetation stresses. These areas were either lacking vegetation or showed vegetation with a lighter coloration than surrounding vegetation. For years prior to 2007, either active farming precluded evidence of potential wetland hydrology or distinctive characteristics and wetness signatures could not be identified.

Figure 9. The areas with persistent signatures of potential wetland hydrology at Site G consistently occurred in the northwest corner of the study area (left), and often expanded into the northern and southeastern portions of the site (right).



3.2 Refining Areas of Interest

Additional off-site study allows for further interpretation and analysis, including the narrowing of areas of interest for installation of on-site groundwater data collection equipment. By turning on multiple layers (polygons drawn around areas of potential hydrology in various years), observable and repeatable patterns can be clearly documented (Figures 10-12). The following figures show how a composite image can be derived from multiple years of off-site aerial image analysis (Figure 13). Field investigations can then focus on those areas that have consistently shown some evidence of potential wetland hydrology during the period evaluated. By decreasing the opacity of each polygon, it is easier to highlight those areas that have shown evidence in multiple years of a wetness signature.

Figure 10. Example demonstrating how multiple potential wetland signature polygons can be “stacked” in order to document areas with recurring features. The current example from Site B utilizes potential wetness signature polygons observed between 2011 and 2014. Each polygon is drawn at 60% opacity; therefore, the more opaque the image, the more occurrences of a potential wetland signature. Note there are several areas where a wetness signature has occurred only once during this period.



Figure 11. The current example utilizes potential wetness signature polygons observed between 2008 and 2014 at Site B. Each polygon is drawn at 60% opacity; therefore, the more opaque the image, the more occurrences of a potential wetland signature. This represents additional evidence that these areas have exhibited signs of potential wetland hydrology over multiple years.



Figure 12. The current example utilizes potential wetness signature polygons observed between 1993 and 2014 at Site B. Each polygon is drawn at 60% opacity; therefore, the more opaque the image, the more occurrences of a potential wetland signature. It is clear that the darker areas exhibit potential wetness signatures in multiple years and therefore should be the target of future field investigations.



Figure 13. A composite image of the multiple polygons observed within Figures 10-12, which reflect portions of this site that should be the focus of future field investigations. In any one year, these features may have decreased or increased in size. Drawing a composite layer helps to refine the area of interest.



3.3 Analysis of Rainfall Normality

Rainfall normality was evaluated for the 265 months occurring within the period of record examined (approximately 1993 – 2014). Summary data for each site is provided in Table 4. The study period analysis indicates that 37 months occurred during drier-than-normal rainfall periods,

172 months were classified as normal rainfall periods, and 55 months were identified as wetter-than-normal periods.

Care must be taken when evaluating rainfall data and the results of WETS analysis, especially in areas with prolonged periods of little or no rainfall. When little or no rainfall is expected, it may become impossible for a dry designation to occur using the WETS approach. For example, during the months of July and August, the 30th and 70th WETS percentiles are both 0.00 in. per month within the study area. As a result, the absence of rainfall is considered the normal condition. Table 3 illustrates this scenario by examining rainfall data from the summer of 2010. During the dry summer months, as little as 0.01 in. of rainfall can result in a WETS designation of a wetter-than-normal rainfall condition. As a result, studies should focus on the normal wet portion of the year when examining rainfall normality and associated aerial photograph interpretation.

Table 3. Example depicting rainfall normality from September 2010 using the DAREM analysis. Note that in the absence of rainfall, the result indicates normal conditions; even small amounts of rainfall (e.g., 0.01 in.) can yield a result of wetter than normal.

2010										
Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0	Normal	2	1	2		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0.01	Wet	3	3	9		Wet = 15-18
Month examined	Sep						Total	15	WET	

4 Discussion

Several of the factors discussed above must be considered in combination when determining the presence and estimated spatial extent of potential wetlands using aerial images, rainfall normality analysis, and associated data streams (e.g., LiDAR). The following sections address these factors and provide guidance on interpreting potential wetness signatures and determining the spatial extent of potential wetlands. As indicated previously, this section provides additional support to current USACE documents and is not intended to replace or supersede those approaches.

4.1 Evaluating the Presence and Timing of Potential Wetland Signatures

The first half of Table 4 displays the quantity of all available images, the number of images containing potential wetland hydrology signatures, and the number of images collected within Normal or Dry rainfall periods that displayed potential wetland hydrology signatures. Aerial images that were cloudy, dark, or incomplete were not counted among the total available images. Each of the sites examined displayed multiple aerial images containing potential wetland hydrology signatures; however, the persistence of hydrologic signature varied greatly over time. For example, Site F contained potential wetness signatures in 85% of the images examined and 82% of the images available during the normal wet portion of the year. Conversely, Site E displayed potential wetland hydrology signatures in only 25% of the images examined; 75% of which occurred during the normal wet portion of the year. The majority (67-100%) of the wetness signatures detected occurred during periods of normal or dry rainfall conditions. As a result, investigations should focus on the normal wet portion of the year when considering the persistence and reliability of potential wetland hydrology signatures.

The second half of Table 4 contains the number of available images collected during normal wet season months (Oct-Apr), the number of those images that expressed a wetland signature, and the number of those images that were taken during Normal or Dry rainfall conditions as assessed using DAREM. Between 31% and 38% of available images were taken during the normal wet portion of the year, with the majority of

images collected during the dry season when cloudy days are infrequent and crops have been planted. As seen in the analysis of the entire dataset, each site examined displayed signatures of potential wetland hydrology during the normal wet portion of the year. Examining the wet season only, 20-100% (65% average) of the images examined identifiable areas of potential wetland hydrology. However, between 92% and 100% of the wetness signatures were observed during normal or drier-than-normal rainfall periods. These results suggest that examining potential wetness signatures during the normal wet portion of the year using the DAREM approach provides a useful tool for examining wetland hydrology in formerly irrigated areas.

Table 4. Analysis of available images and the number of those images exhibiting potential wetland hydrology signatures. Images are examined 1) throughout the year and 2) only during the wet period of the year. The average acreage of potential wetland hydrology signatures is also presented.

Site Name	Total Images	All Images		Images during Wet Season (Oct-Apr)			Average Area of Wetland Signature for All Months with Available Data (acres)
		# of Images w/Wetland Signatures	# of Images w/Wetland Signatures with Normal/Dry Precipitation	Total Images	# of Images w/Wetland Signatures	# of Images w/Wetland Signatures with Normal/Dry Precipitation	
Site A	36	13	9	14	5	5	0.25
Site B	34	34	25	13	13	12	4.10
Site C	34	22	19	13	8	8	1.08
Site D	31	23	15	13	10	9	29
Site E	32	8	8	10	6	6	43.2
Site F	28	24	23	9	9	9	4.66
Site G	29	17	16	10	6	6	1.35

In some cases, land-use practices such as cropping and poor image quality obscured the ability to identify potential wetness signatures, after which potential wetness signatures become more evident. Analysis should be conducted during a period representative of the current conditions. For example, ongoing cropping activities until 2006 impacted the ability of investigators to readily identify wetness signatures at Site D. As a result, interpretation of available data from 2006 to the present should form the basis of analysis at that site.

4.2 Estimating the Spatial Extent of Potential Wetland Areas

The final column in Table 4 depicts the average area of the potential wetland signature on site for all images where a wetland signature was present. Note that the average footprint of areas with potential wetland hydrology ranges from 0.25 acre to 43.2 acres, demonstrating that areas with potential wetland hydrology are heterogeneously dispersed across the landscape. The observed variation results from differences in landscape position, rainfall prior to image collection, seasonality and evapotranspiration rates, vegetation cover and type, and a number of other factors (e.g., soil type). Additionally, the spatial extent of potential wetland signatures varies temporally within each study area (see Appendix 1). For example, the wetness signature footprint at Site B fluctuates between 1.97 and 9.29 acres following cessation of cropping and irrigation inputs in 2003. In order to constrain the observed variability, determinations of the estimated acreage of potential wetland hydrology should focus on the normal wet portion of the year and should not rely on simple averages across all available data. Analyzing images collected during the wet portion of the year under the current land-use conditions typically decreases the variability of wetness signature acreage.

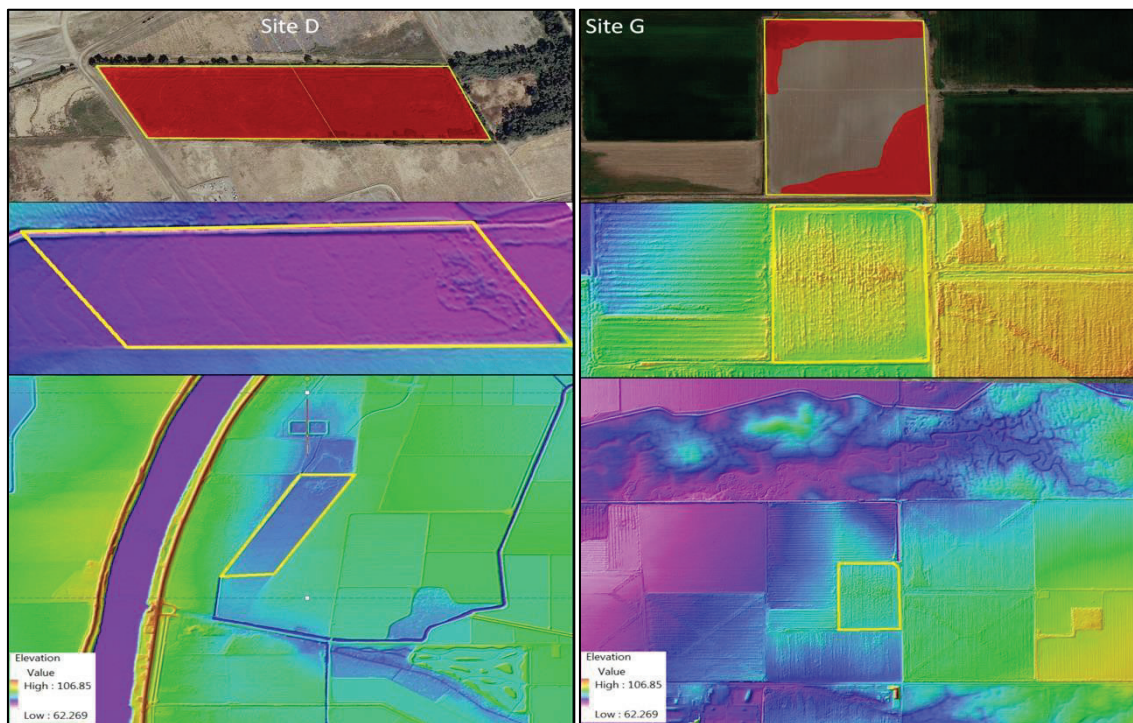
Although the determination of potential wetland areas should focus on the wet portion of the year, some wetness signatures become more evident during the dry period of the year. These typically include the presence of green vegetation, color shift (especially visible in infra-red images), or change in vegetation cover/type persisting into the dry months. Wet areas that remain identifiable during the dry portion of the year help guide analysis of aerial imagery and provide insight into the location and installation of onsite monitoring equipment. However, the dry season images provide less value in determining the spatial extent of potential wetland features.

4.3 Preliminary Interpretation of LiDAR Data

Light Detection and Ranging (LiDAR) is a technique that can aid in wetland delineation (Lichvar et al. 2006; Gillrich and Lichvar 2014). LiDAR measures distance by illuminating a target with a laser and analyzing the reflected light. LiDAR data is collected using a wide variety of instruments and methodologies, and continues to improve with technological advancements. Aerial or mobile LiDAR systems consist of five primary components: a mounting platform, a laser and scanning mirror, an inertial

measurement unit (IMU), a global positioning system (GPS) antenna and receiver, and a data collection and processing computer. During the preliminary data-gathering stage of wetland delineations, LiDAR data and products can be used to view hydrologic, topographic, and vegetative patterns within a project location to focus the investigation on transitional areas. Although LiDAR data may provide information on inundation extent, they include no information concerning inundation frequency or duration. Therefore, LiDAR cannot prove the necessary period of inundation to be considered as a primary indicator of wetland hydrology. LiDAR data gathered during the growing season could potentially be used as a secondary indicator of wetland hydrology (Gillrich and Lichvar 2014). At this time, LiDAR elevation images are useful tools for verifying potential wetness signatures by showing areas of low elevation where ponding of water is possible (Figure 14). LiDAR data or products are not an adequate substitute for a field investigation and information should be verified in the field (Gillrich and Lichvar 2014).

Figure 14. Comparison of potential wetland signature composite images (Top) to LiDAR images showing elevation (Middle), and landscape view (Bottom). Note that lower areas of elevation are similar to composite images of potential wetland signatures.



5 Summary

The approaches outlined above provide a framework for identifying areas with potential wetland hydrology on formerly irrigated agricultural areas in support of existing USACE and SPD guidance. Evaluation of multiple years of imagery helps to determine the presence, persistence, and spatial extent of potential wetness signatures. Developing composite images can further assist with documentation. Analysis of rainfall normality can further refine the process, providing context for imagery interpretation and aiding in field data collection/verification. Other tools (e.g., LiDAR) can also assist with wetland identification and selection of study sites for on-site investigations. The study sites examined each displayed some evidence of potential wetland hydrology, although the extent and persistence of features varied significantly. The appendixes following provide a user guide for conducting image interpretation, WETS tables that can be utilized to determine rainfall normality, and examples of data from each of the study sites examined. Wetland determinations should utilize all available off-site tools in combination with field site visits to achieve the most comprehensive approach to wetland identification in formerly irrigated agricultural areas.

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Appendix A: Aerial Image Interpretation User Guide

1. Identify your area of interest and collect as many aerial images as possible. Arc GIS and other sources of imagery are useful tools for collecting aerial images.
2. Analyze the images for potential wetland signatures. The basis for this interpretation involves looking at vegetation presence, color, vigor, and other factors in the context of the time of year and ongoing irrigation practices. For further guidance, refer to section 3.2 of this technical report and USDA-NRCS (1997).
3. Interpret the aerial images available and consider when they were taken and the season of the year. Focus on images taken during the typical wet season of the year. For the Arid West this is from October through April. Use rainfall normality data to determine if a specific image was taken during a “wet”, “normal” or “dry” period. For analyses focus on images taken during “normal” and “dry” conditions as “wet” rainfall normality periods may be inconclusive. For access to rainfall normality data for Sacramento, CA refer to the Appendices section of the technical report.
4. Refine areas of interest by making composite images by overlapping multiple years of potential wetland signatures to determine consistency within potential areas. For further guidance, refer to section 4.9 of this report.
5. Collect supporting material (elevation imagery, LiDAR, etc.) if available, to compare to the potential wetland signature composite areas collected previously. If they correlate with each other this is an indicator that those areas are potential wetlands.
6. Conduct field observations, if possible, focusing on the areas that you have determined as potential wetlands. Perform a wetland delineation seeking indicators of current wetland hydrology, vegetation, and hydric soils.
7. Determine the estimated wetland area (acres) using one or a combination of the analysis tools: aerial imagery, field observation, or other tools as available.

Data Form - Aerial Image Interpretation

Photo Image #	Date (mo/yr)	Potential Wetness Signatures	WETS tbl condition	Wet portion of the year?	Wet Area 1 (Acres)	Wet Area 2 (Acres)	Comments
1							
2							
3							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
Summary of Findings:							

Step-by-Step Example Using the Data Form

- Step 1: Identify your area of interest.



- Step 2: Enter the photo image # and date.

<div> <div>Paste</div> <div>Format Painter</div> <div>B I U</div> <div></div> <div></div> <div></div> <div></div> </div> <div>Clipboard</div> <div>Font</div>			
B3			
	A	B	C
1	Photo Image #	Date (mo/yr)	Potential Wetland Signature
2	1	Apr-13	
3	2		
4	3		
5	4		

- Step 3: Enter the potential wetness signature from the dropdown options.

Photo Image #	Date (mo/yr)	Potential Wetness Signatures	W co
1	Apr-13	Discoloration	
2		Stressed Vegetation	
3		Dark Areas	
4		Discoloration	
5		Surface Water	
6		Dry Season Vegetation	
		None	
		Other (specify in comments)	

- Step 4: Observe the wets table and indicate if the image was taken during a “wet,” “normal,” or “dry” period using the dropdown menu. (For Sacramento, CA refer to the Appendices in this report for the WETS table data.)

Photo Image #	Date (mo/yr)	Potential Wetness Signatures	WETS tbl condition	W of
1	Apr-13	Discoloration	Normal	
2			Dry	
3			Normal	
4			Wet	

- Step 5: Indicate if it is during the wet portion of the year using the dropdown menu.

Photo Image #	Date (mo/yr)	Potential Wetness Signatures	WETS tbl condition	Wet portion of the year?	Tot (a
1	Apr-13	Discoloration	Normal	Yes	
2				Yes	
3				No	

- Step 6: Measure the potential wetland area size (acres). Create a polygon around the area. In the polygon's properties, scroll over to measurements to find the area. Make sure the unit is acres. Insert the area into the data form.

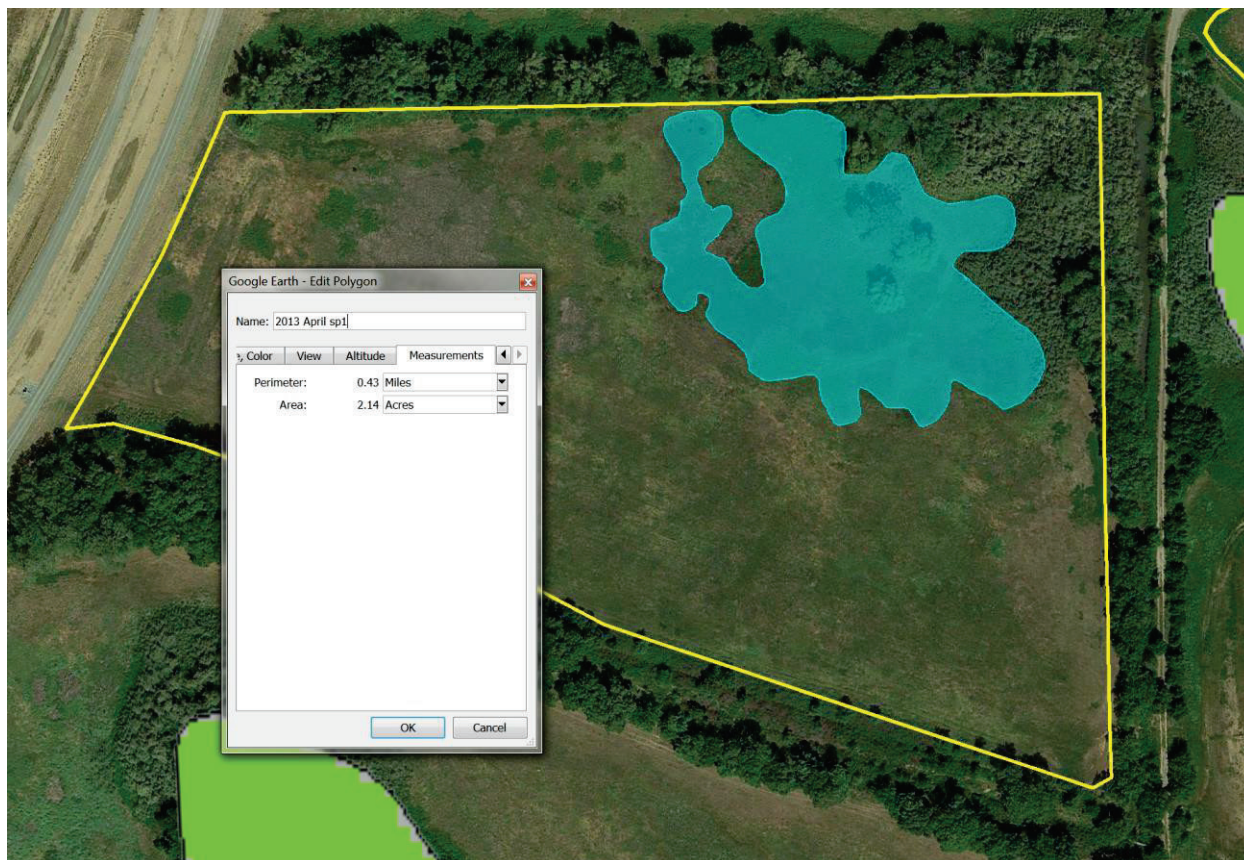


Photo Image #	Date (mo/yr)	Potential Wetness Signatures	WETS tbl condition	Wet portion of the year?	Wet Area 1 (Acres)
1	Apr-13	Discoloration	Normal	Yes	2.14
2					

- Step 7: If there is more than one potential wetland area, list each separately.

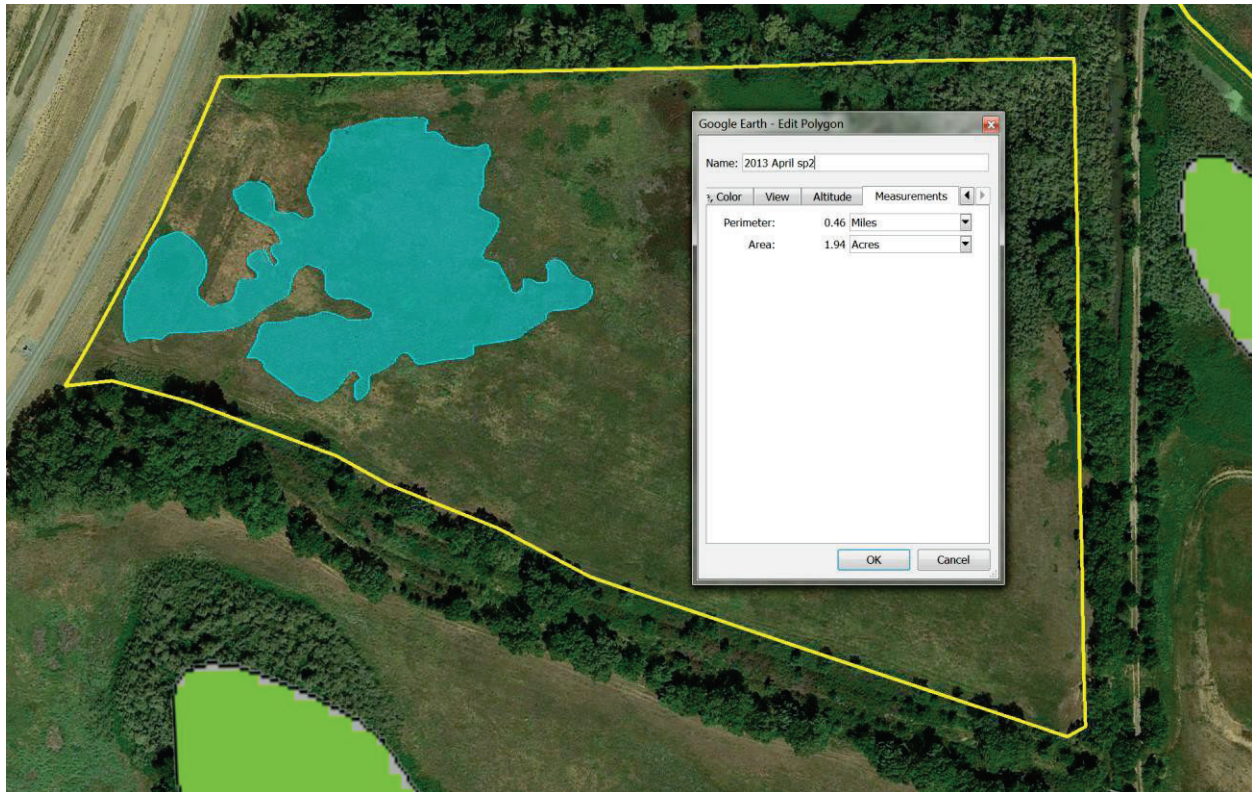


Photo Image #	Date (mo/yr)	Potential Wetness Signatures	WETS tbl condition	Wet portion of the year?	Wet Area 1 (Acres)	Wet Area 2 (Acres)
1	Apr-13	Discoloration	Normal	Yes	2.14	1.94
2						

- Step 8: Add additional comments regarding the image or analyses as needed.

Photo Image #	Date (mo/yr)	Potential Wetness Signatures	WETS tbl condition	Wet portion of the year?	Wet Area 1 (Acres)	Wet Area 2 (Acres)	Comments
1	4/1/2013	Discoloration	Dry	Yes	2.14	1.94	Standing water observed in the NW corner
2							

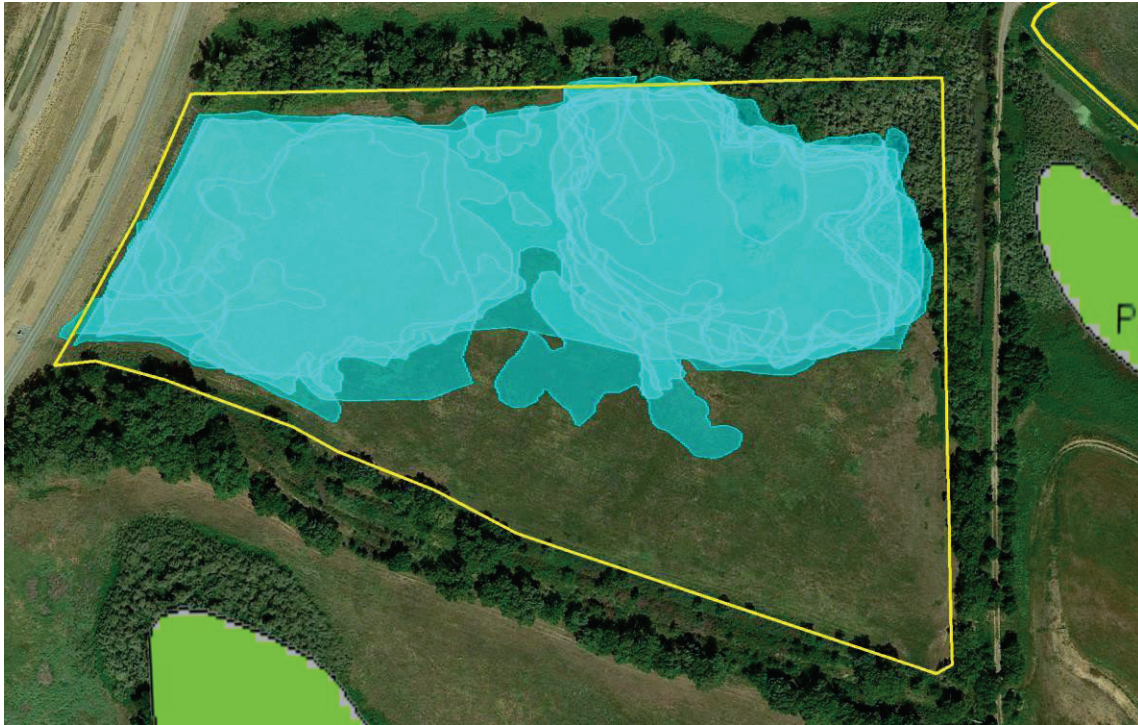
- Step 9: Repeat steps 1-7 for all available images for the site during the wet portion of the year.

Photo Image #	Date (mo/yr)	Potential Wetness Signatures	WETS tbl condition	Wet portion of the year?	Wet Area 1 (Acres)	Wet Area 2 (Acres)	Comments
1	4/1/2014	Surface Water	Dry	Yes	2.38		Standing water observed in the NW corner
2	2/1/2014	Surface Water	Dry	Yes	2.31	0.44	Standing water observed in the NW corner
3	4/1/2013	Discoloration	Dry	Yes	2.14	1.94	Standing water observed in the NW corner
4	10/1/2012	Surface Water	Normal	Yes	2.7	2.58	Standing water observed in the NW corner
5	10/1/2011	Surface Water	Normal	Yes	7.1		Standing water observed in the NW corner
6	4/1/2011	Discoloration	Normal	Yes	2.44		Standing water observed in the NW corner
7	2/1/2011	Surface Water	Normal	Yes	1.97		Standing water observed in the NW corner
8	11/1/2010	Surface Water	Wet	Yes	3.02	3	Standing water observed in the NW corner
9	4/1/2010	Discoloration	Normal	Yes	3.26		Standing water observed in the NW corner
10	10/1/2009	Surface Water	Normal	Yes	6.77		Standing water observed in the NW corner
11	2/1/2008	Surface Water	Normal	Yes	2.79		Standing water observed in the NW corner
12	12/1/2005	Surface Water	Normal	Yes	2.94	0.27	Standing water observed in the NW corner
13							

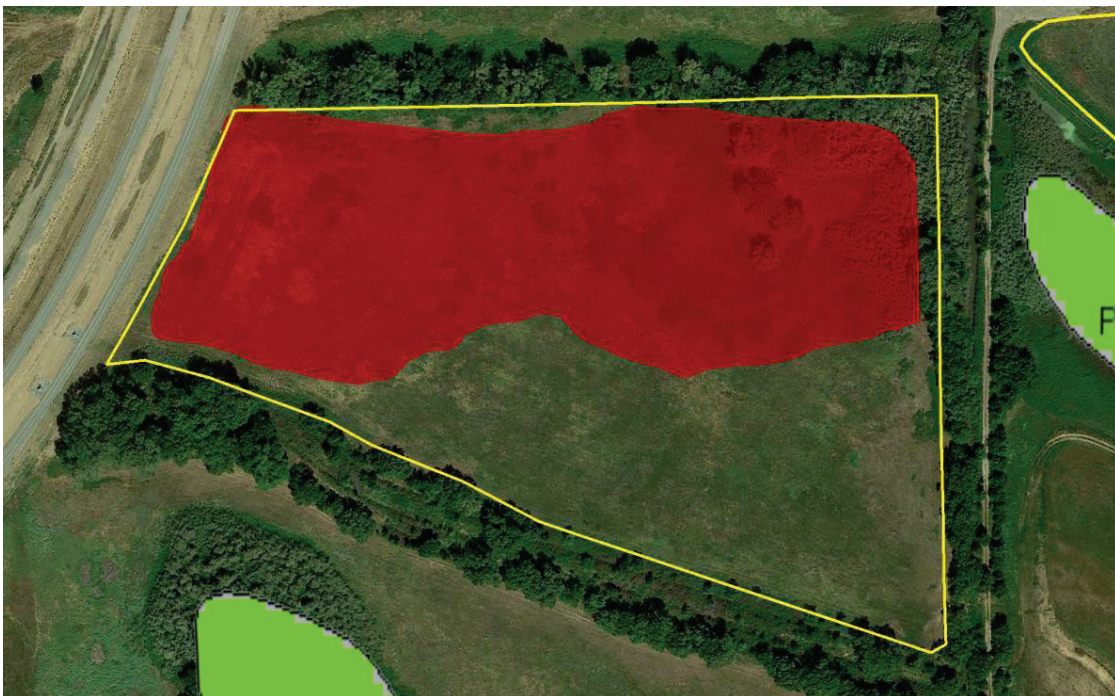
- Step 10: Remove any images that were not taken during “normal” or “dry” conditions.

Photo Image #	Date (mo/yr)	Potential Wetness Signatures	WETS tbl condition	Wet portion of the year?	Wet Area 1 (Acres)	Wet Area 2 (Acres)	Comments
1	4/1/2014	Surface Water	Dry	Yes	2.38		Standing water observed in the NW corner
2	2/1/2014	Surface Water	Dry	Yes	2.31	0.44	Standing water observed in the NW corner
3	4/1/2013	Discoloration	Dry	Yes	2.14	1.94	Standing water observed in the NW corner
4	10/1/2012	Surface Water	Normal	Yes	2.7	2.58	Standing water observed in the NW corner
5	10/1/2011	Surface Water	Normal	Yes	7.1		Standing water observed in the NW corner
6	4/1/2011	Discoloration	Normal	Yes	2.44		Standing water observed in the NW corner
7	2/1/2011	Surface Water	Normal	Yes	1.97		Standing water observed in the NW corner
8	4/1/2010	Discoloration	Normal	Yes	3.26		Standing water observed in the NW corner
9	10/1/2009	Surface Water	Normal	Yes	6.77		Standing water observed in the NW corner
10	2/1/2008	Surface Water	Normal	Yes	2.79		Standing water observed in the NW corner
11	12/1/2005	Surface Water	Normal	Yes	2.94	0.27	Standing water observed in the NW corner
12							

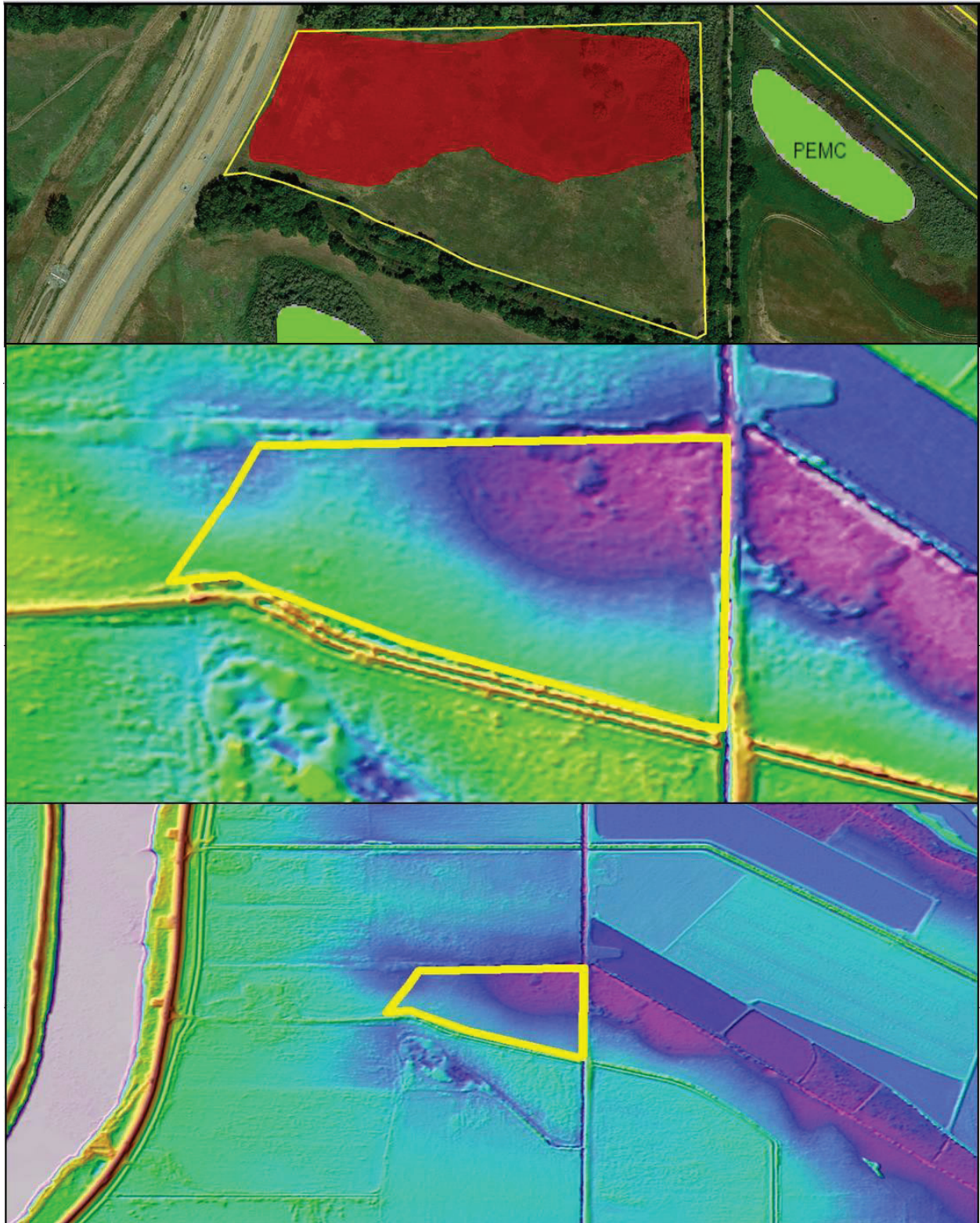
- Step 11: Overlap potential wetland areas over each other to observe repetition.



- Step 12: From the overlaid images, create a composite image of the potential wetland area.

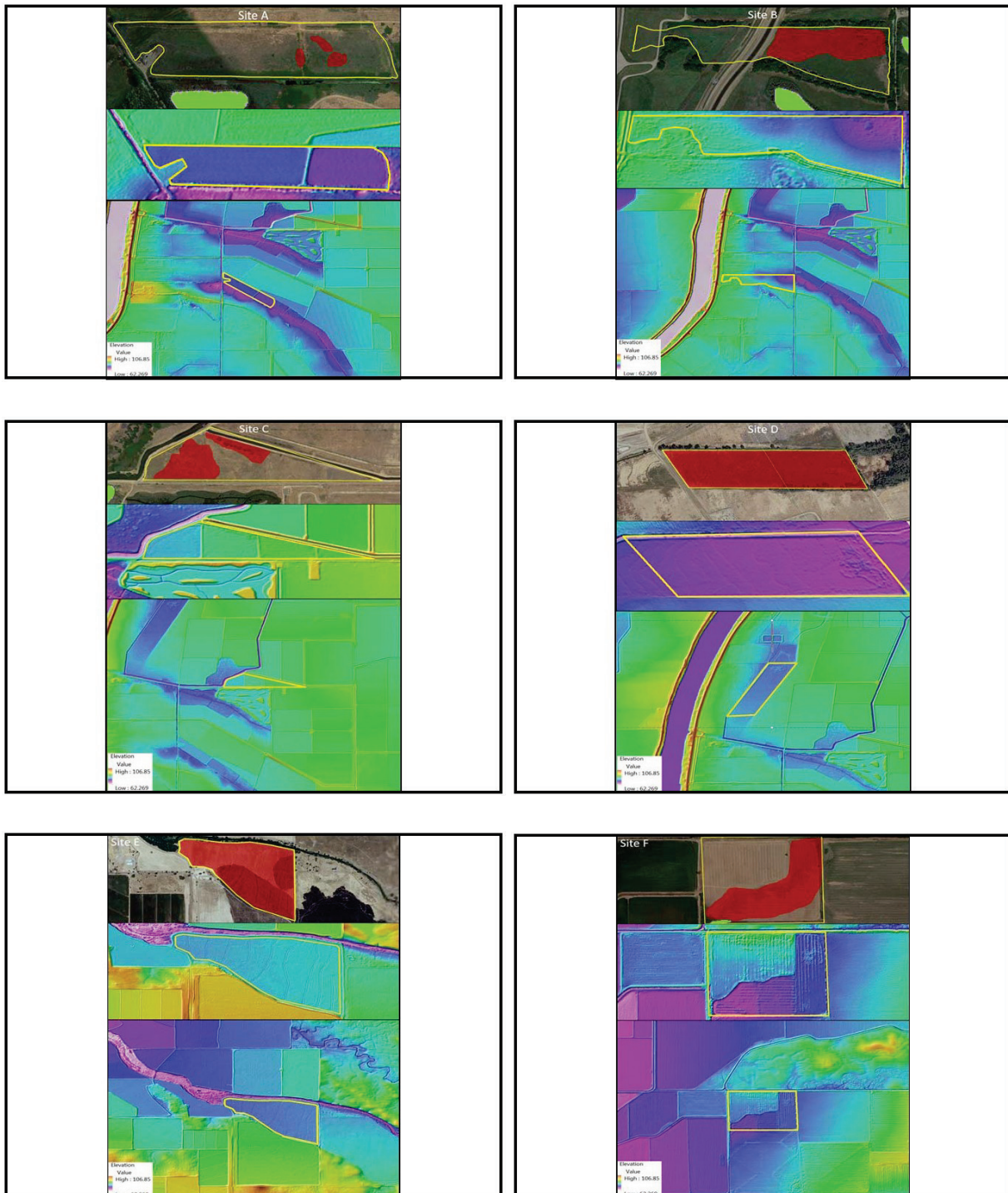


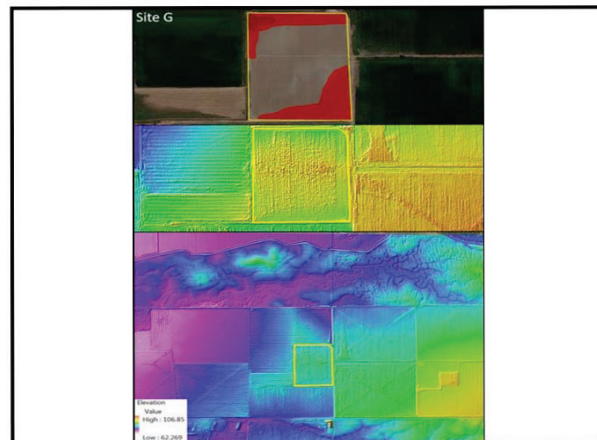
- Step 13: Compare the composite image to other supporting material, such as elevation maps or LiDAR images, to look for further evidence of wetland features.



- Step 14: Conduct field observations if possible. Perform wetland delineations focusing on the potential wetland areas determined in Step 12.
- Step 15: Determine the estimated wetland area size of the site using aerial imagery, field observations, and/or other tools as available.

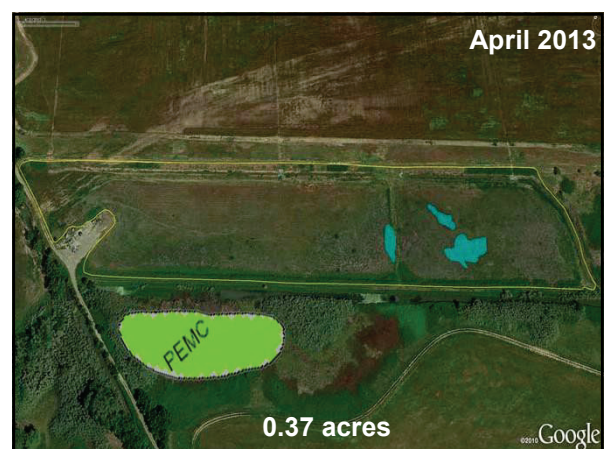
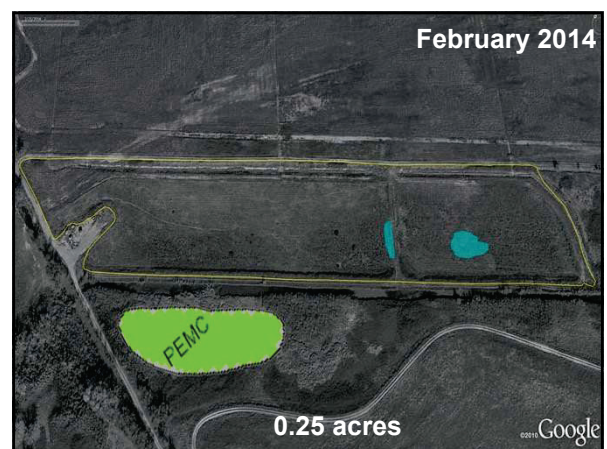
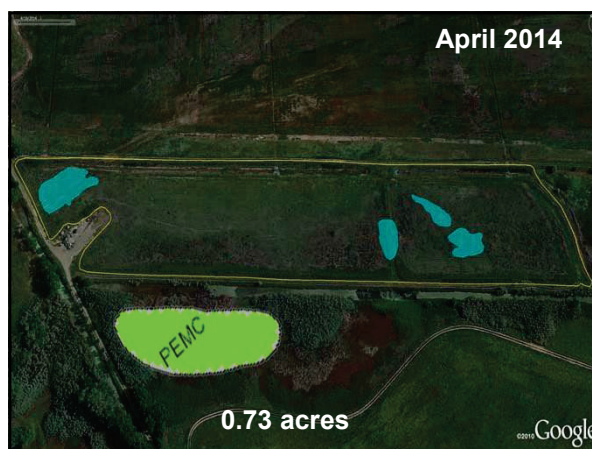
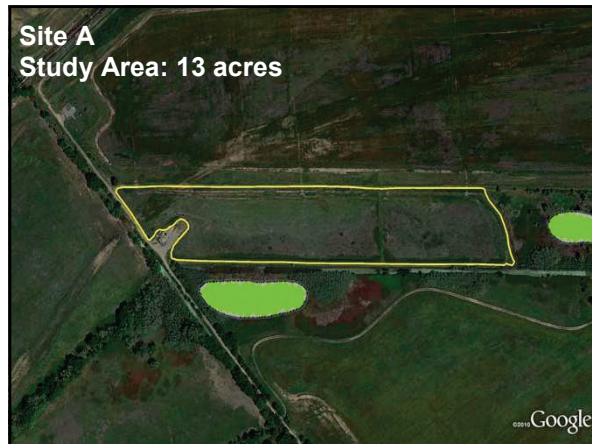
Appendix B: LiDAR Comparison of Areas of Interest





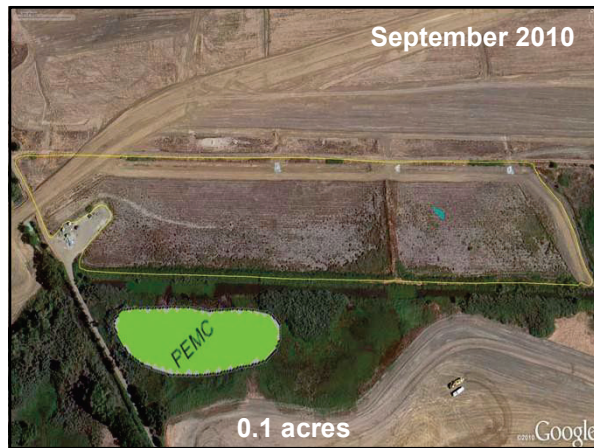
Aerial Images

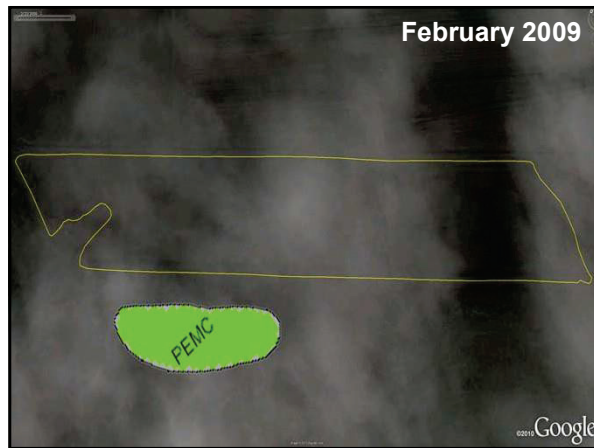
Site A



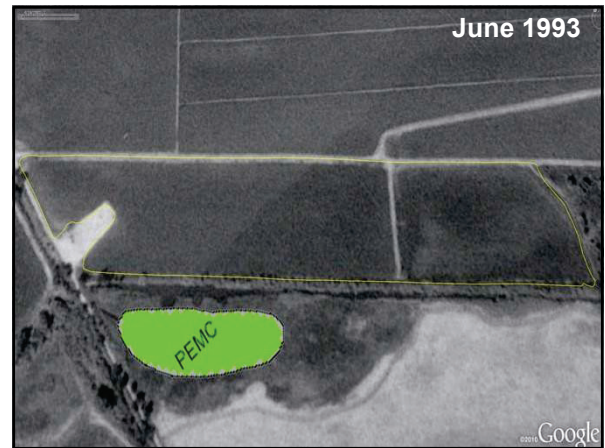
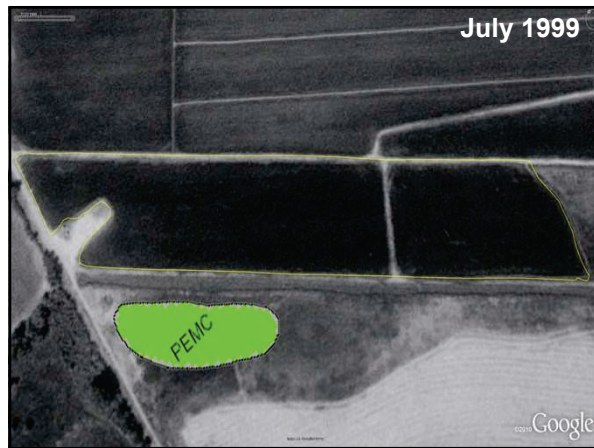




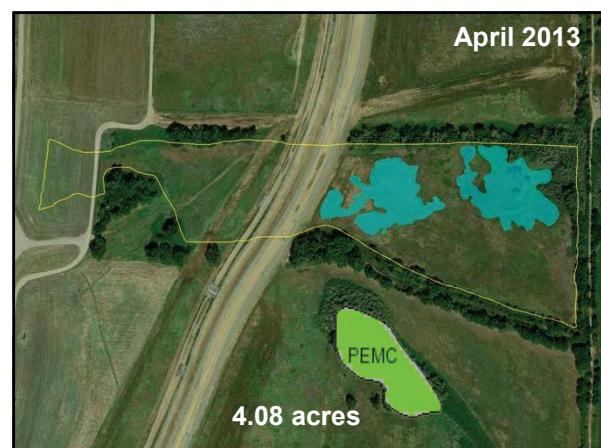
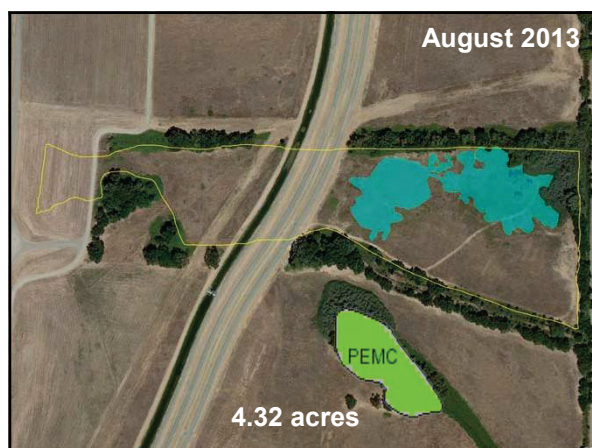
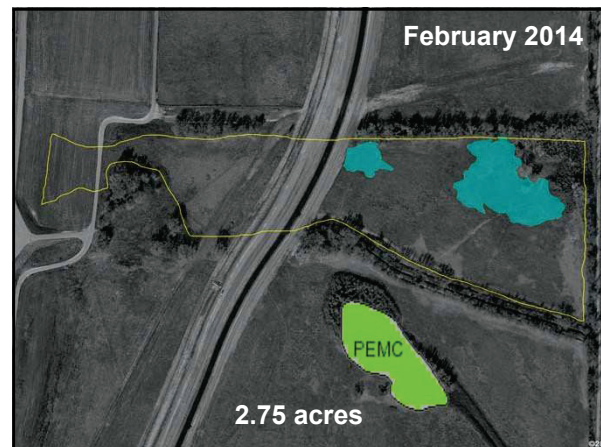
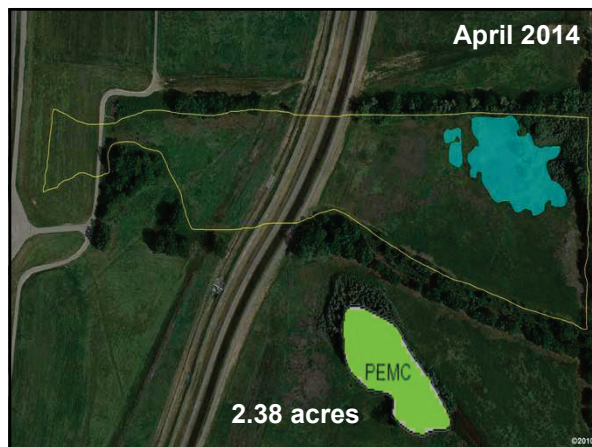
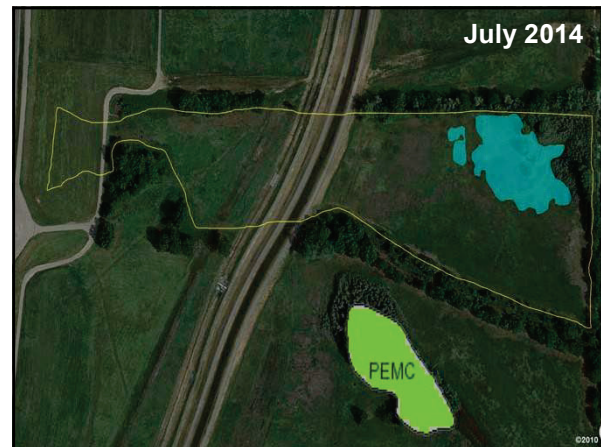
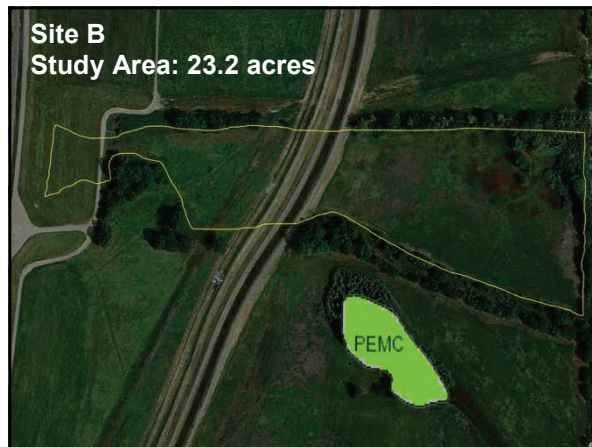


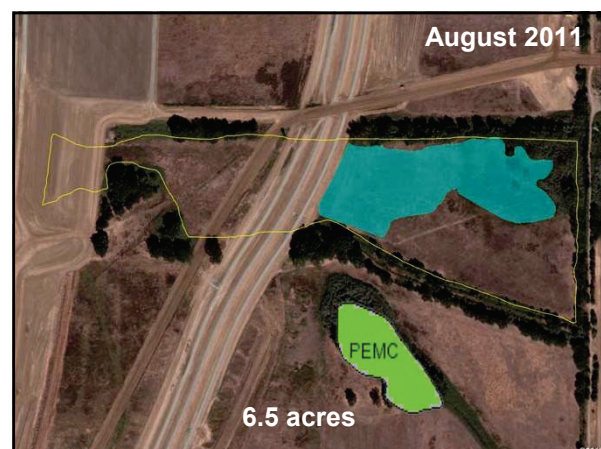
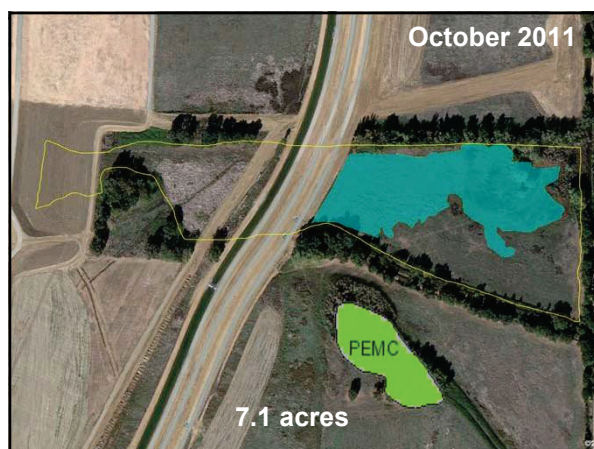
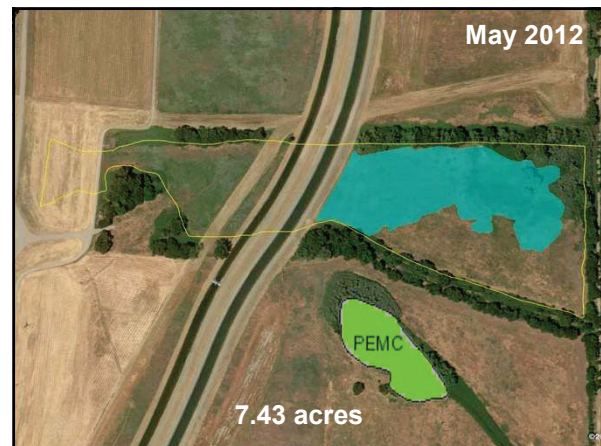
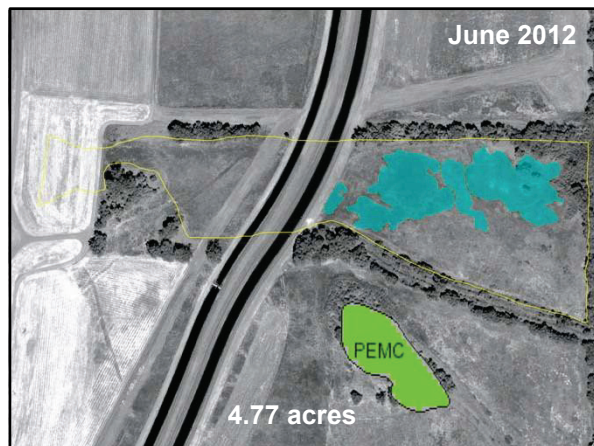
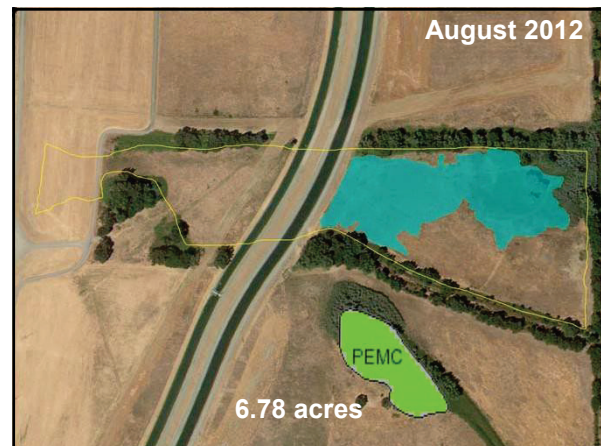
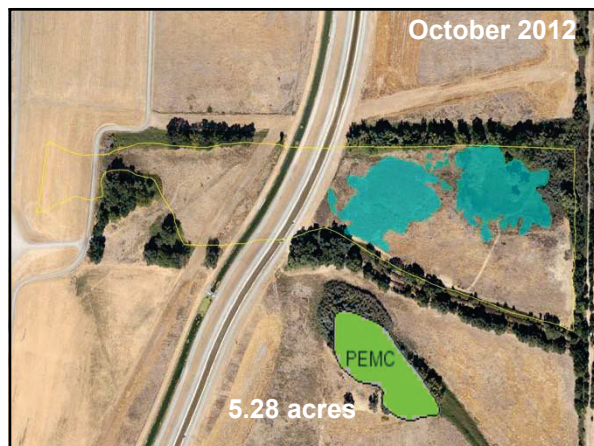


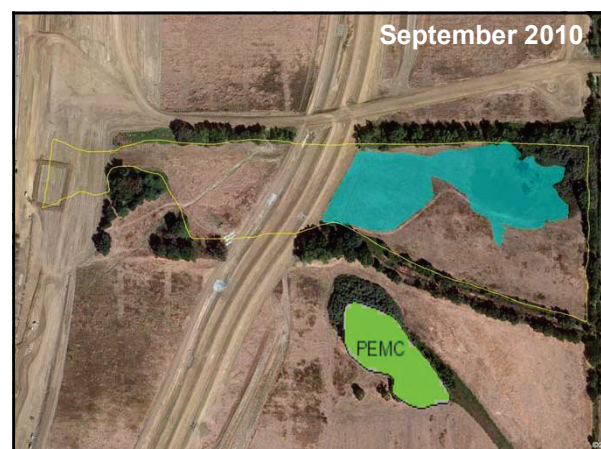
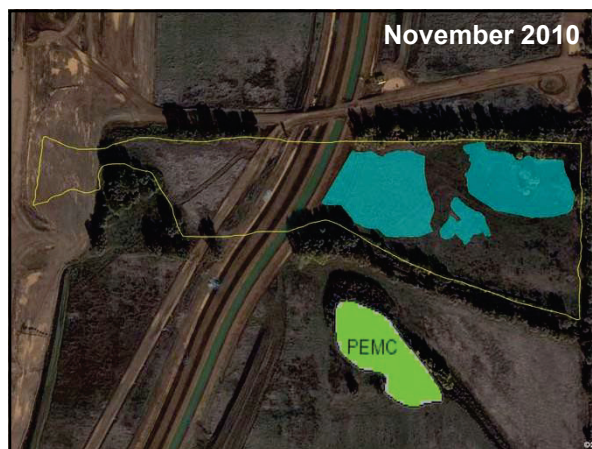
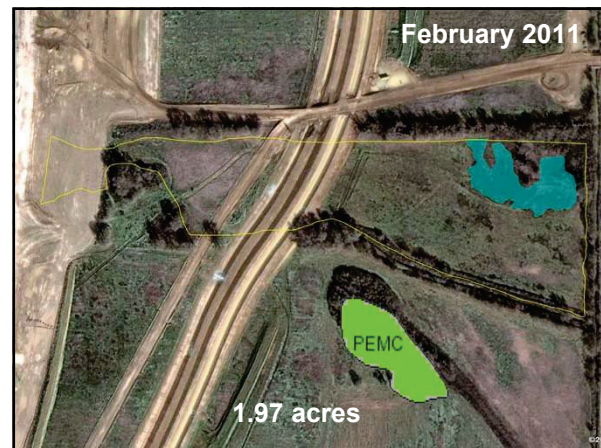
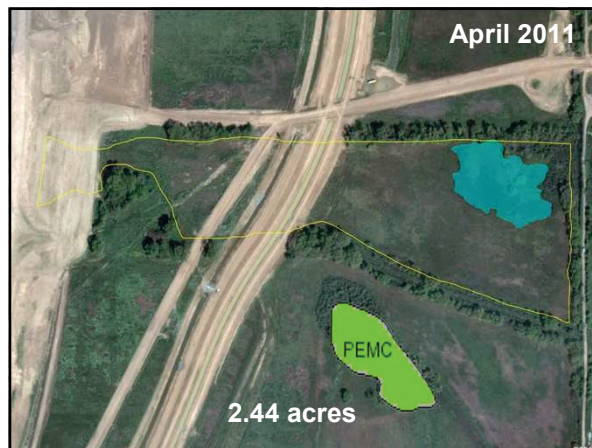
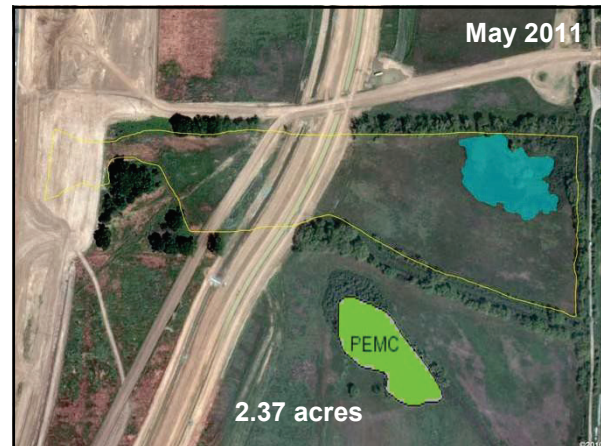
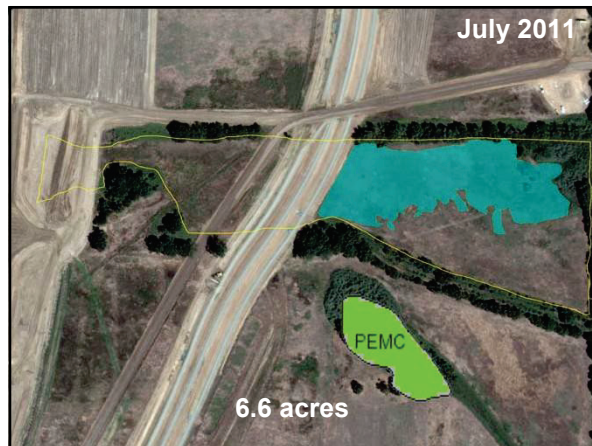


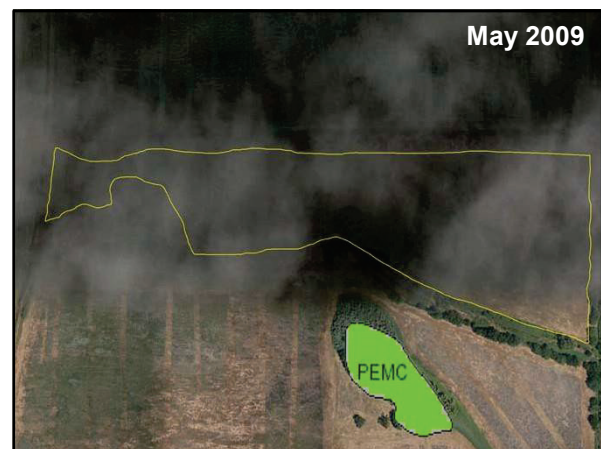
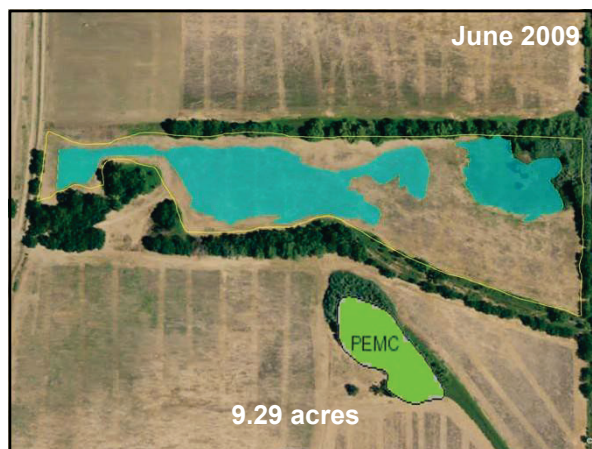
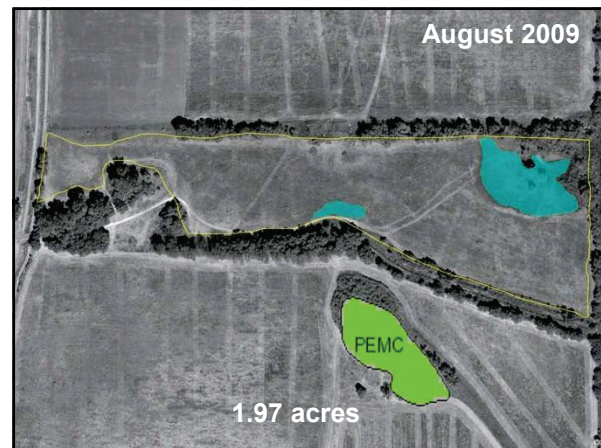
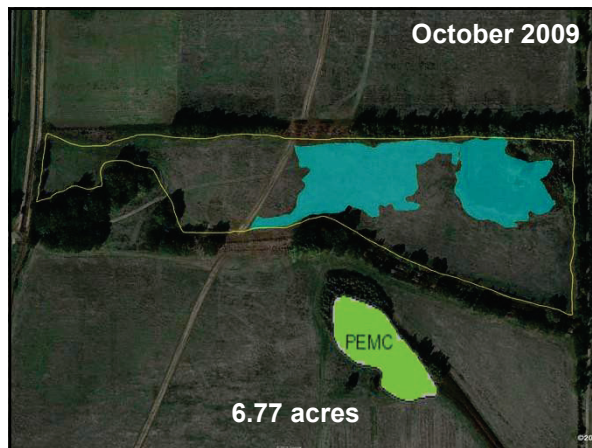
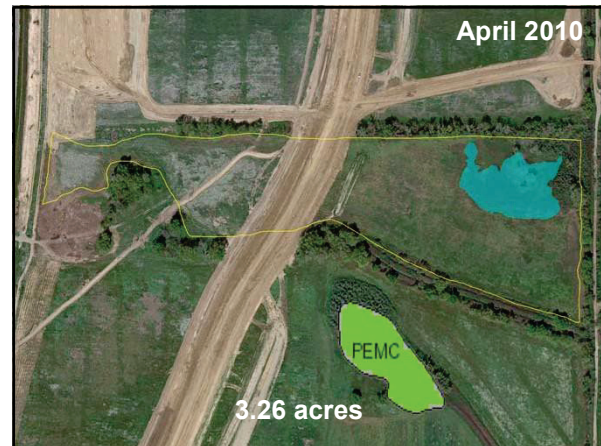
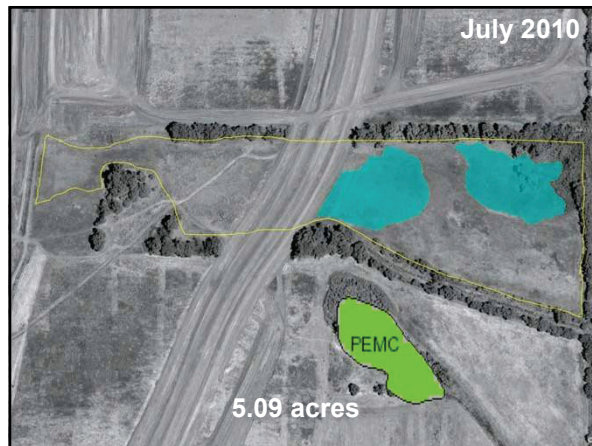


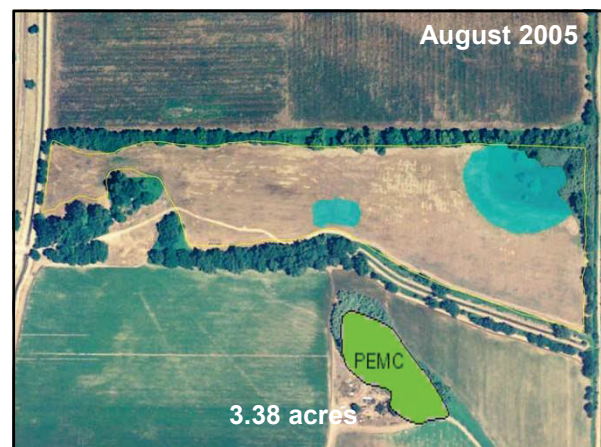
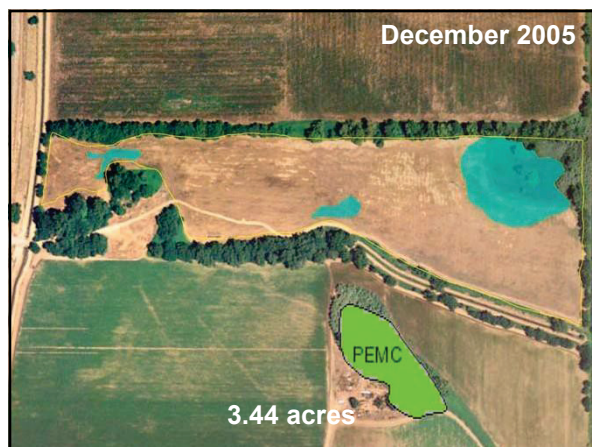
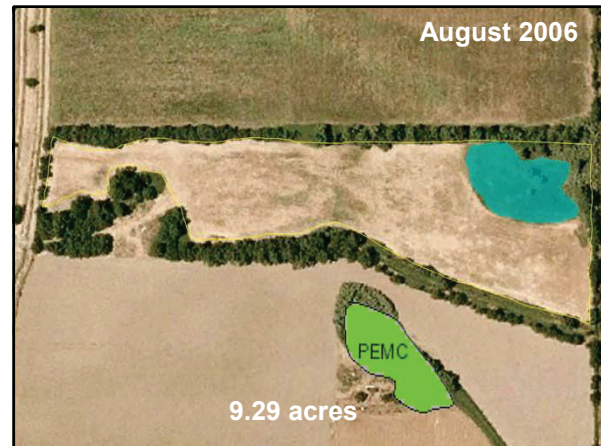
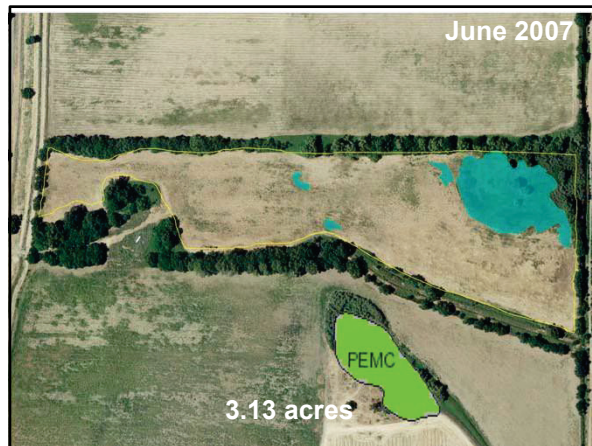
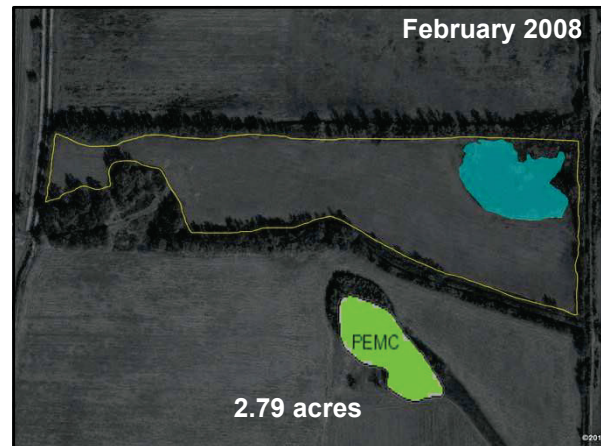
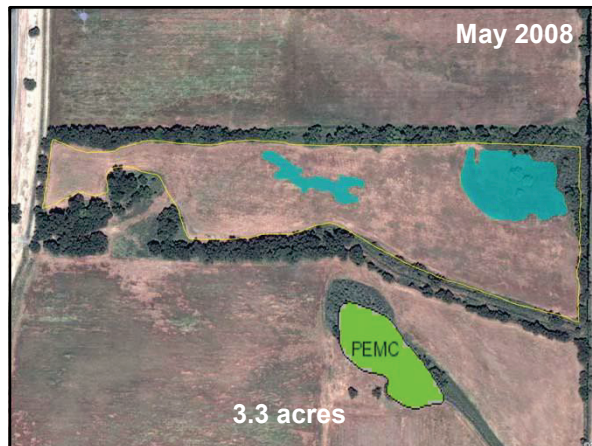
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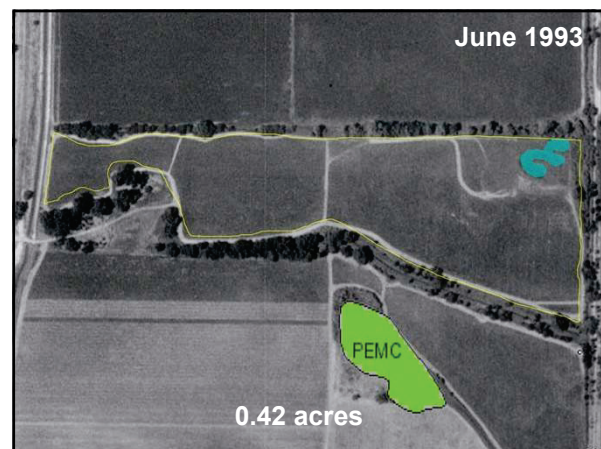
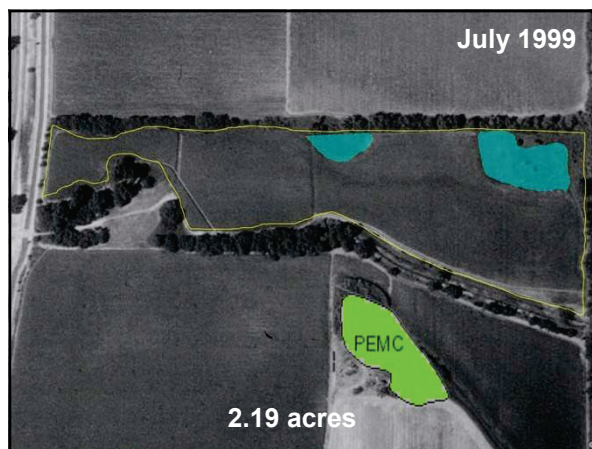
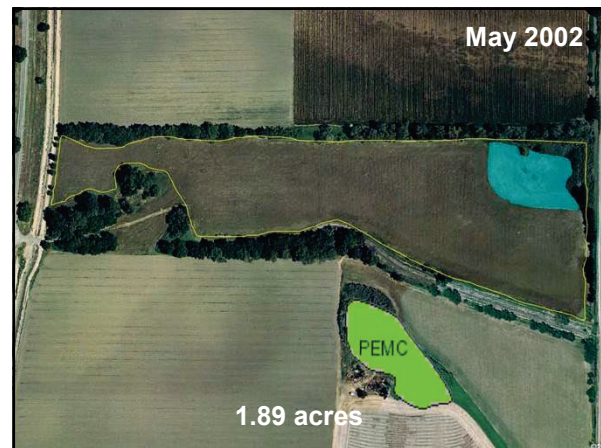
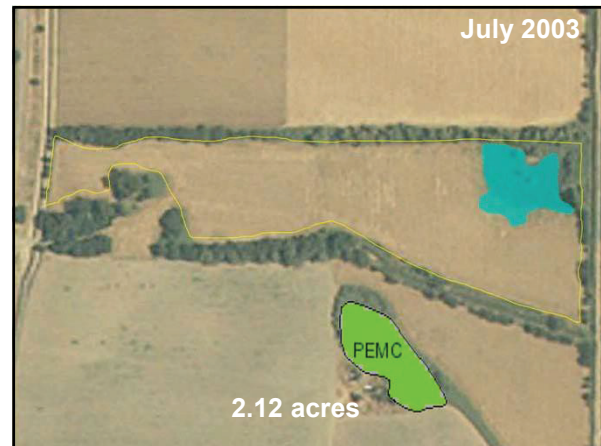




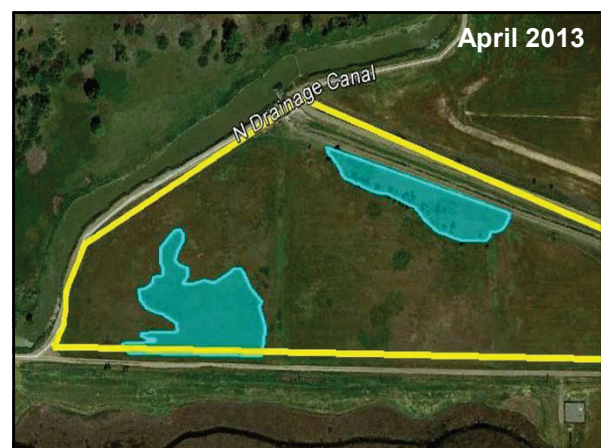
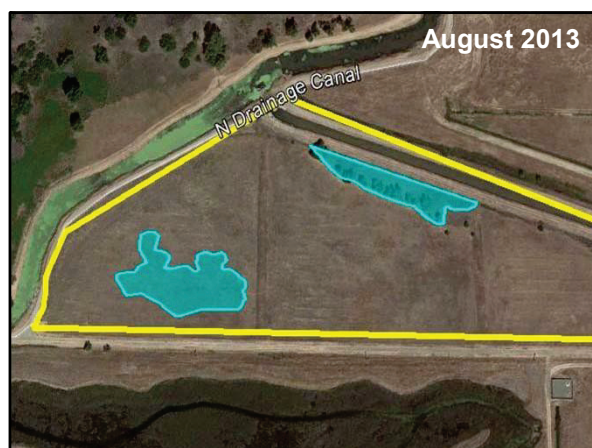
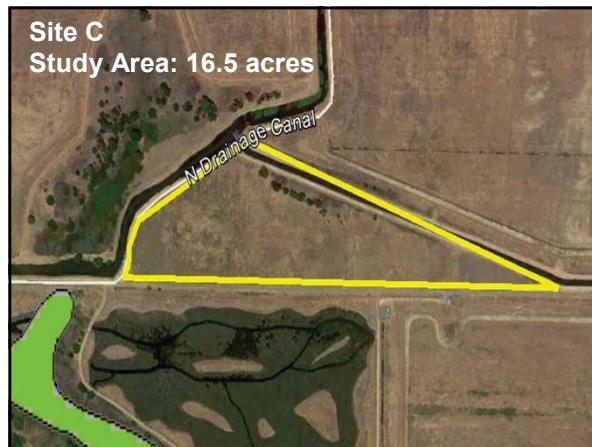


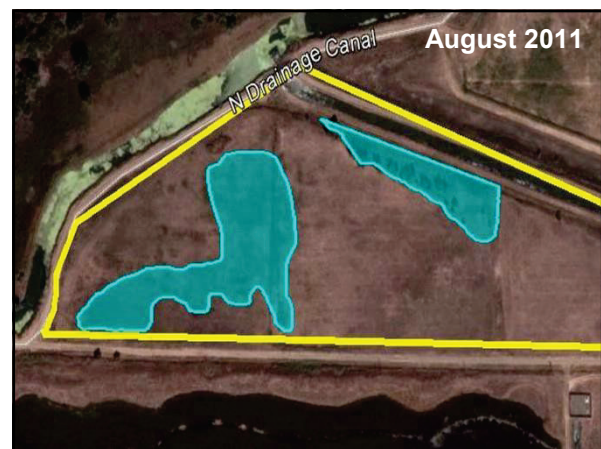


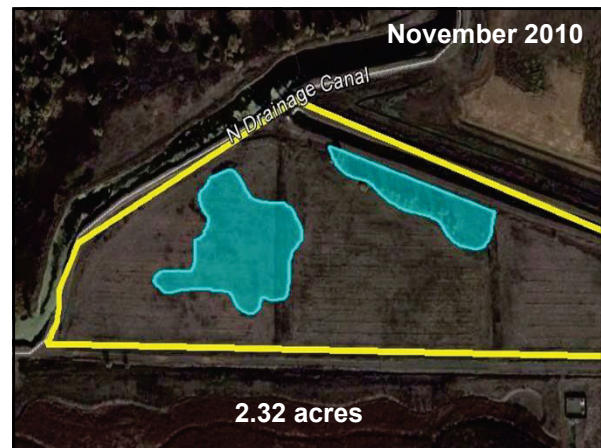
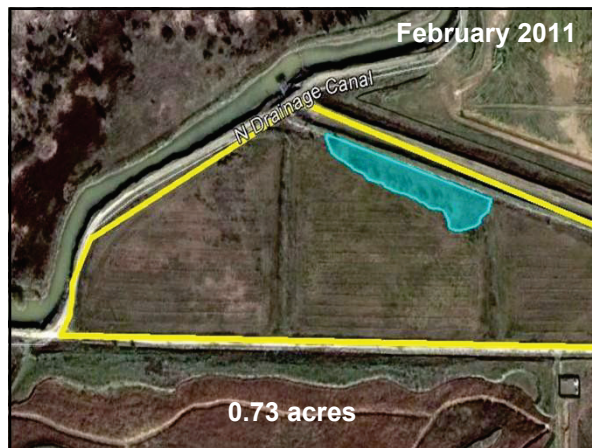


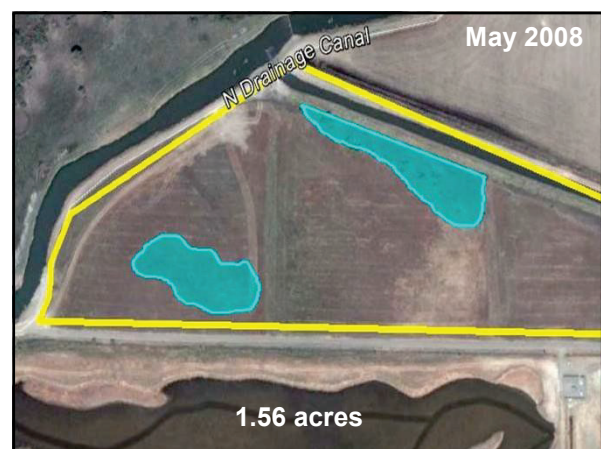
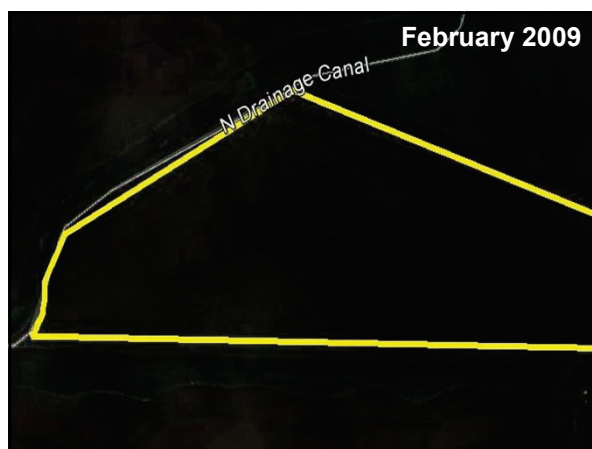
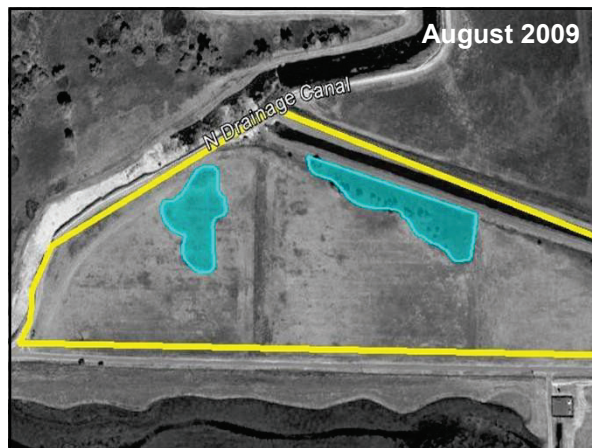
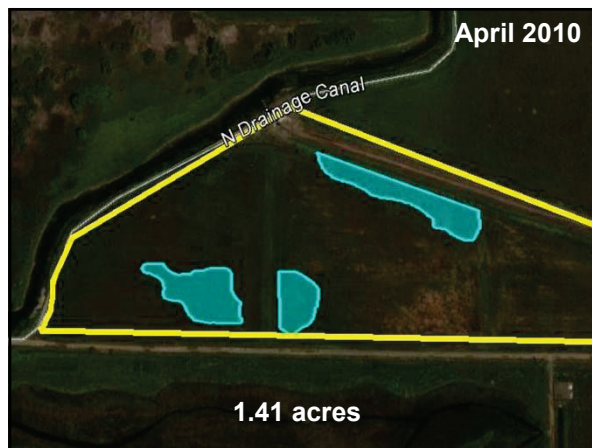


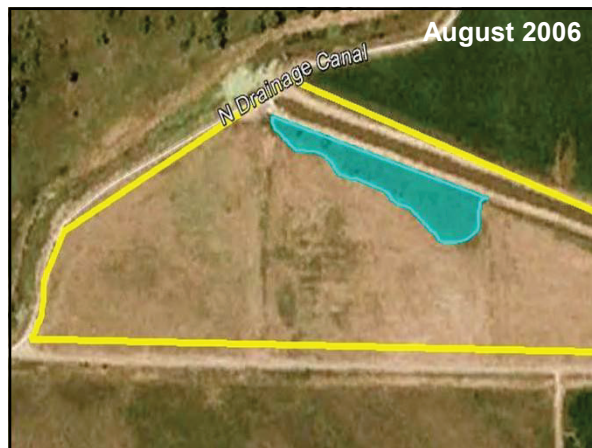
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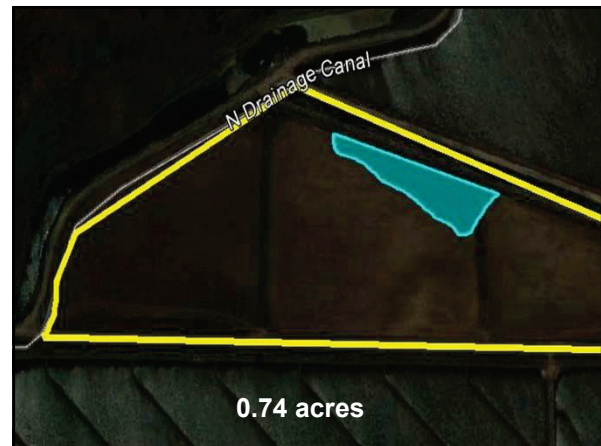


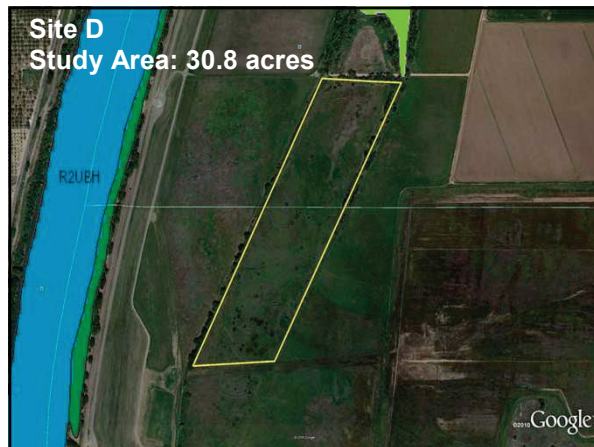


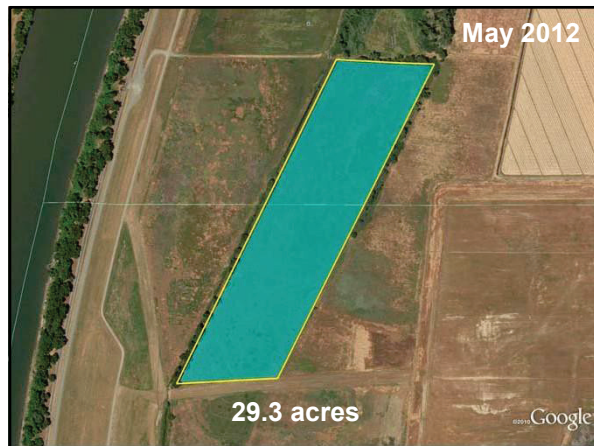


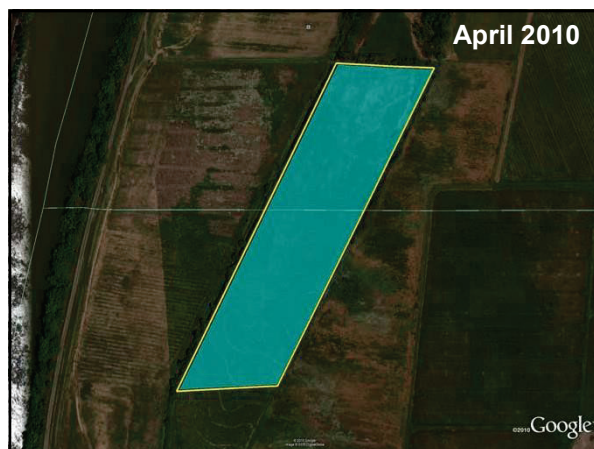


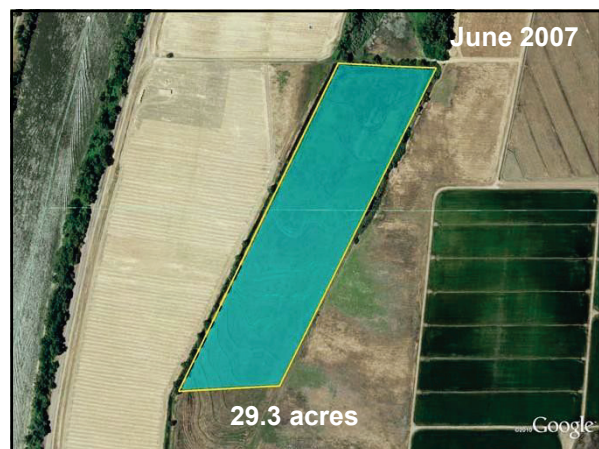
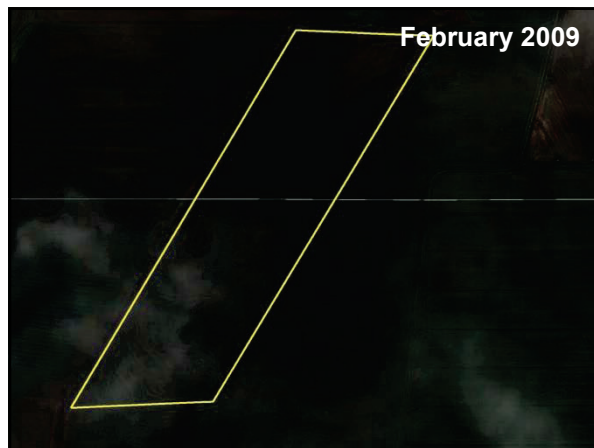




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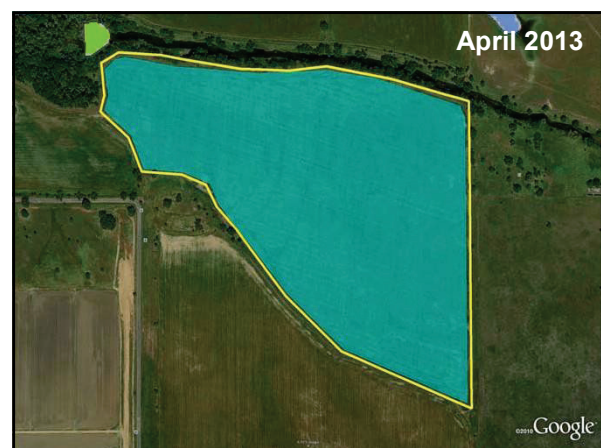
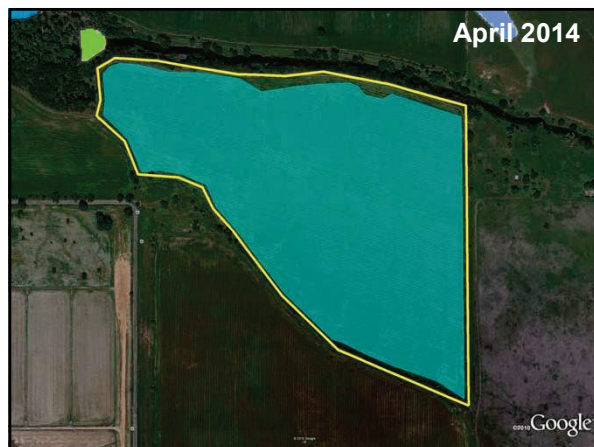
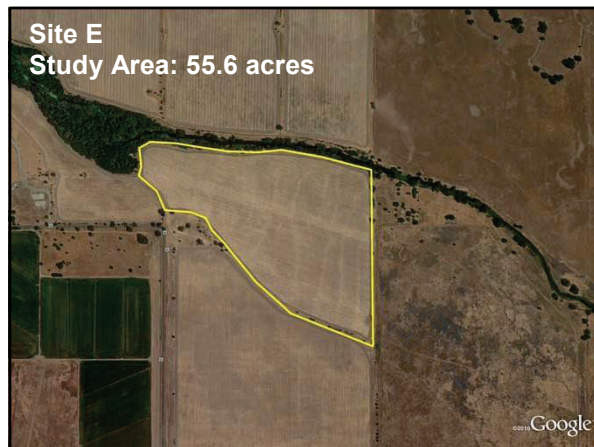


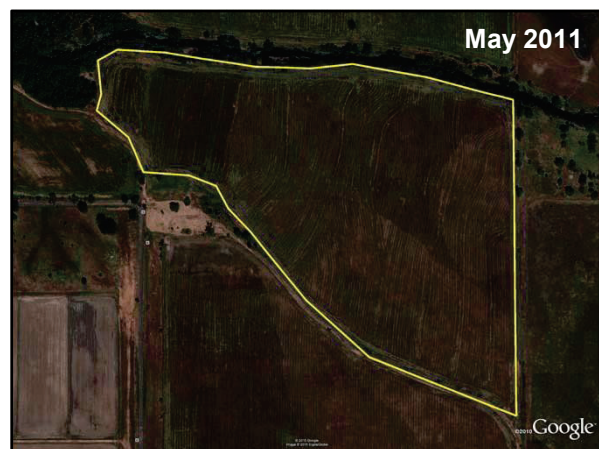
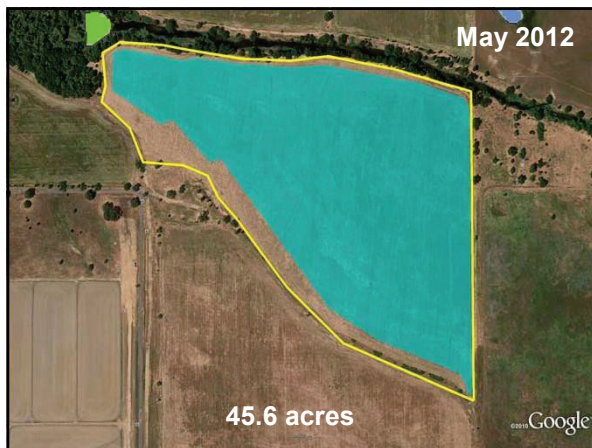
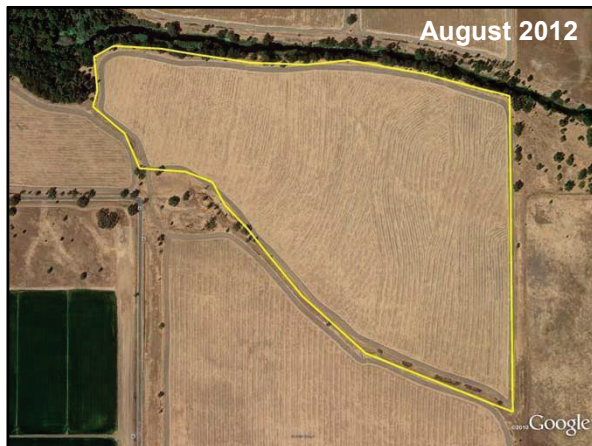


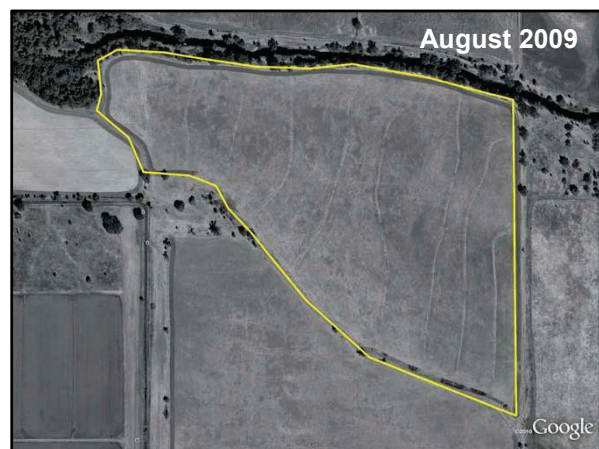
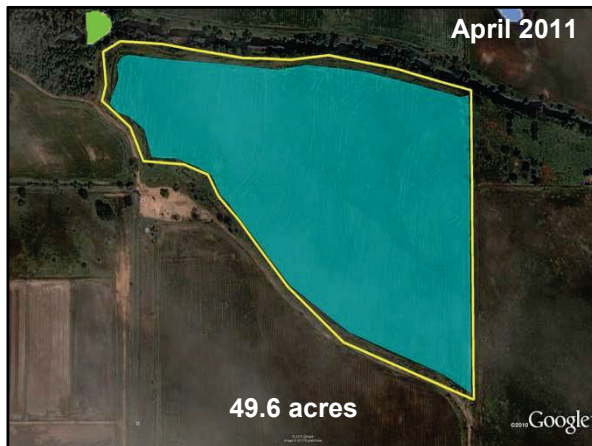


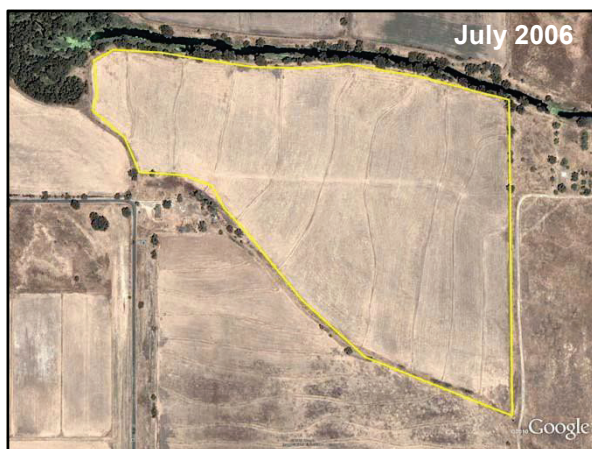
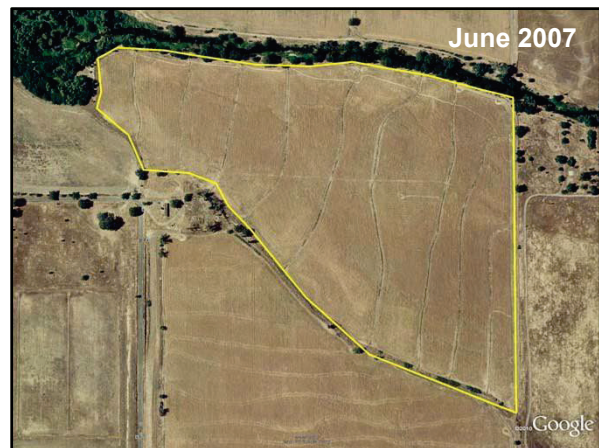
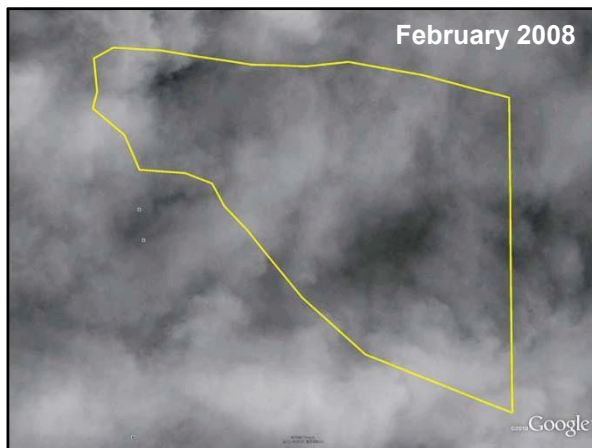
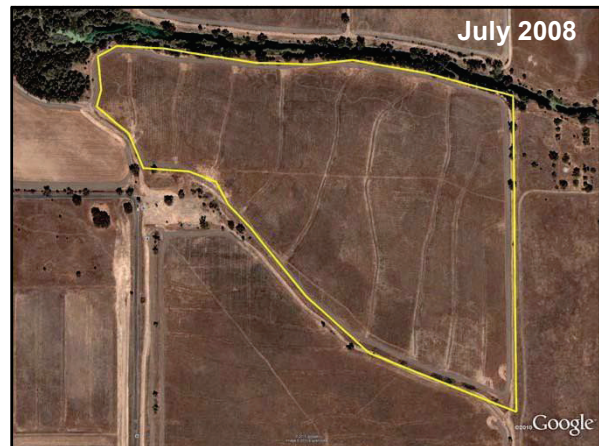


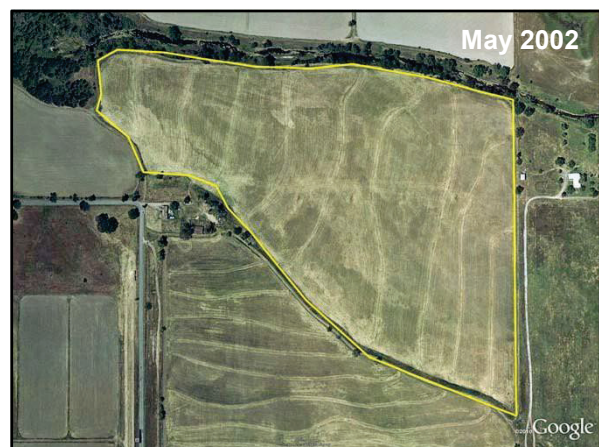
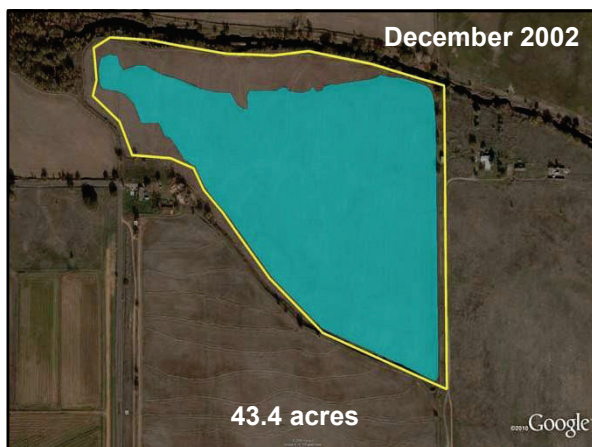
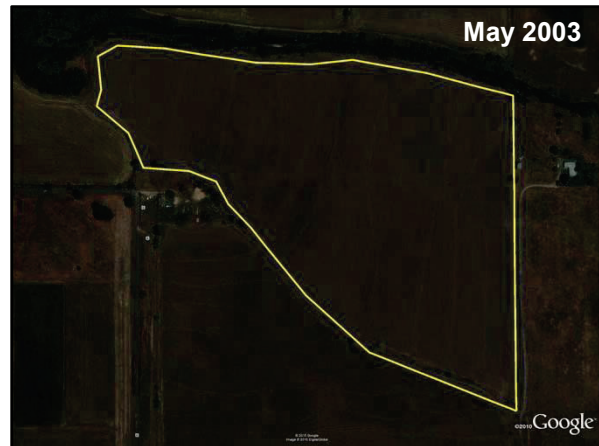
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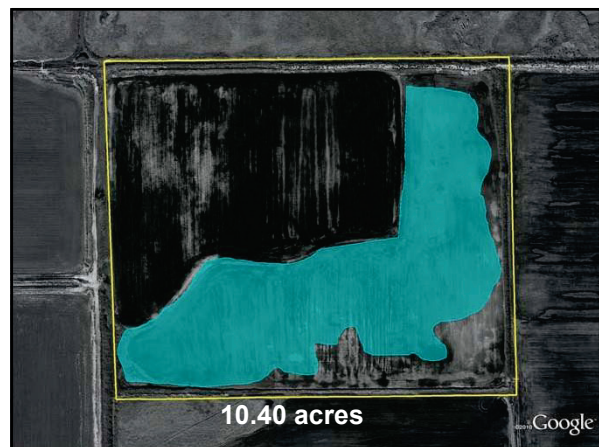




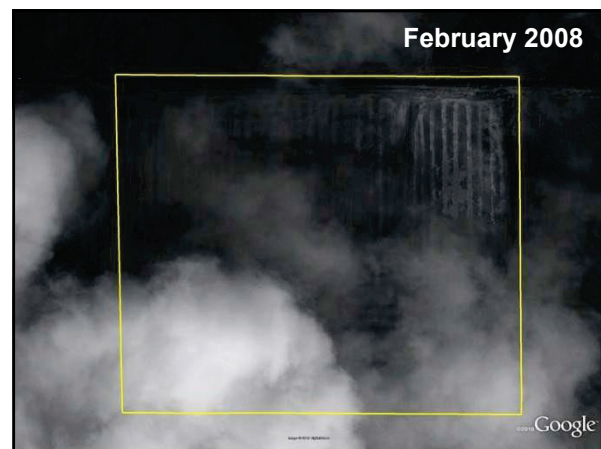
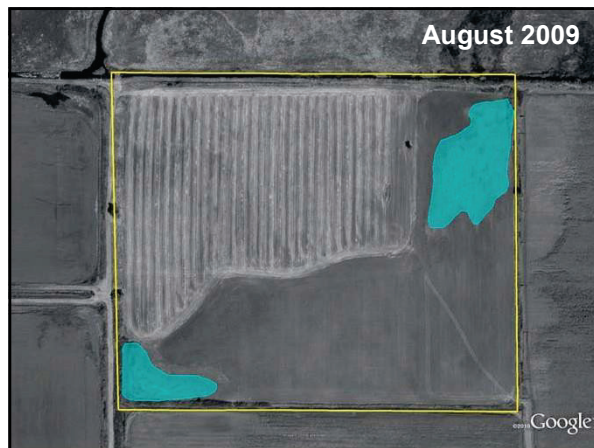




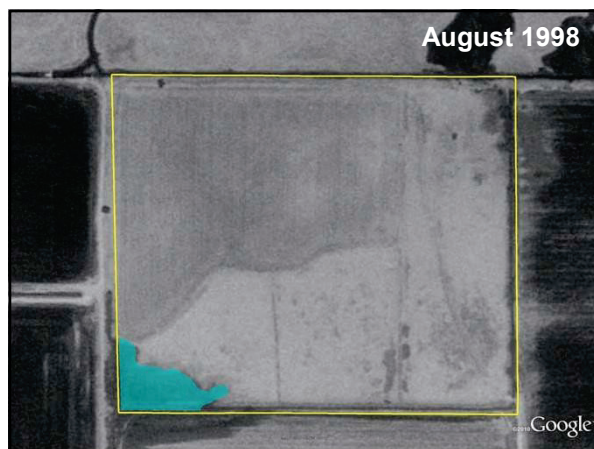
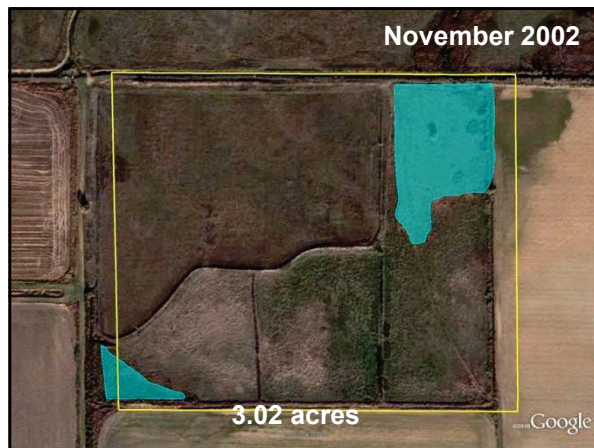
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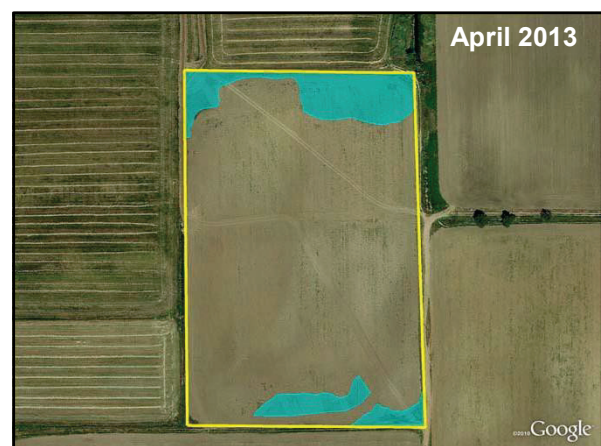
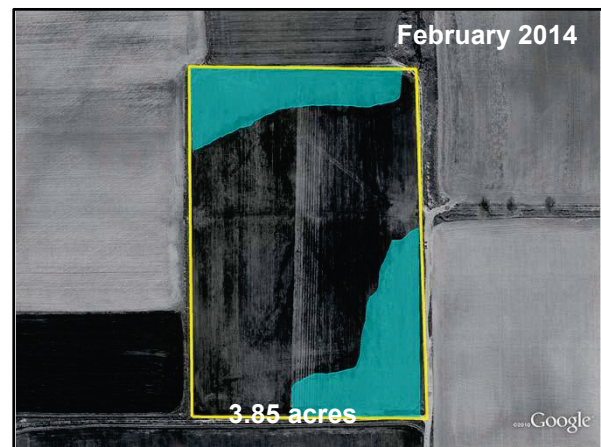


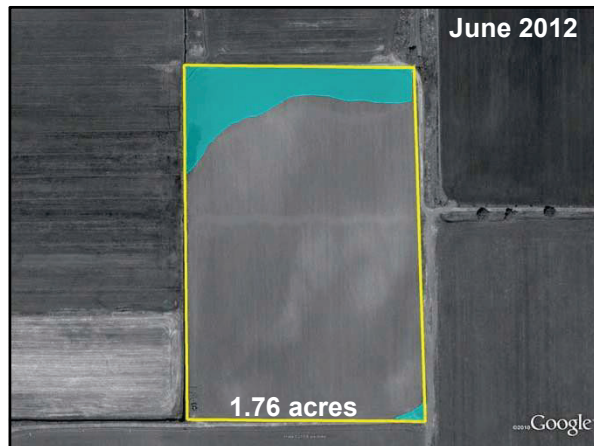


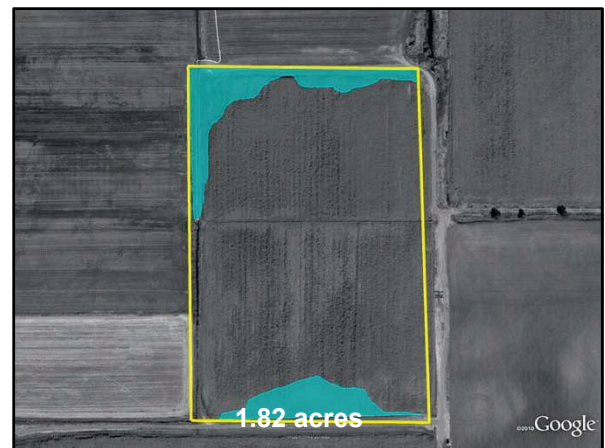
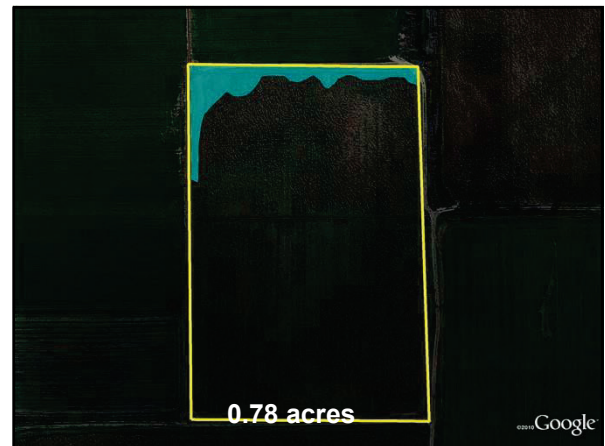
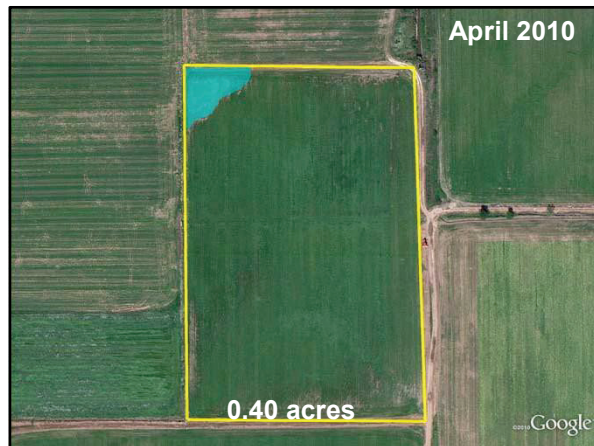


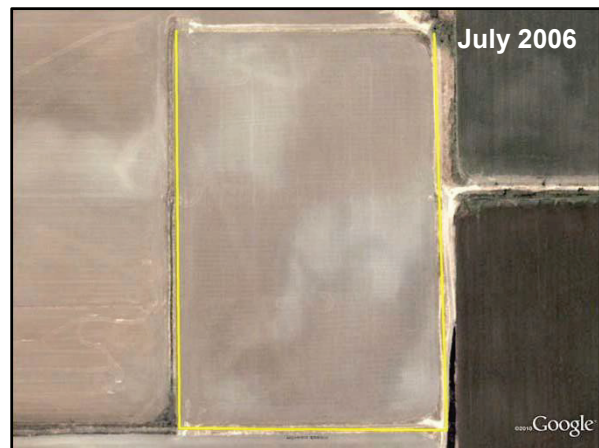
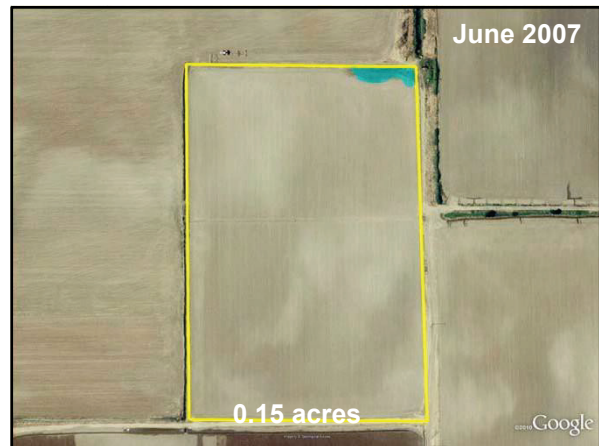
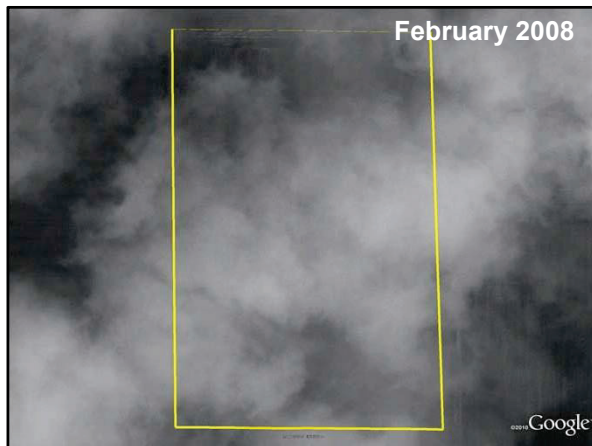


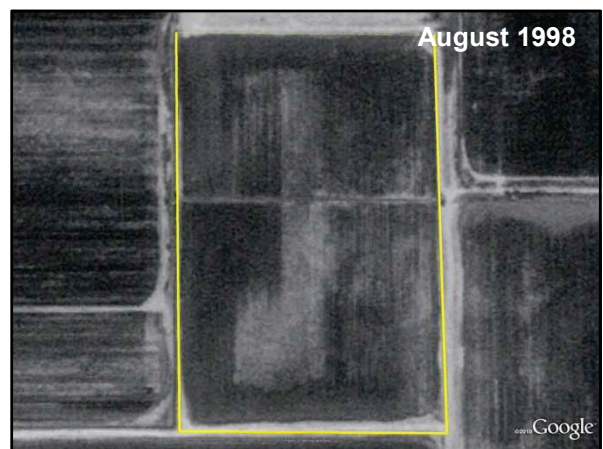
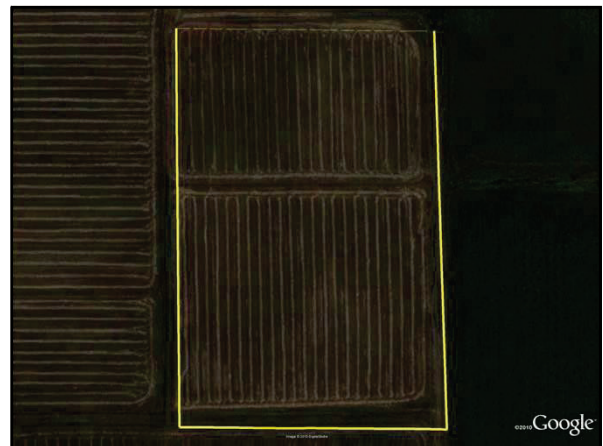
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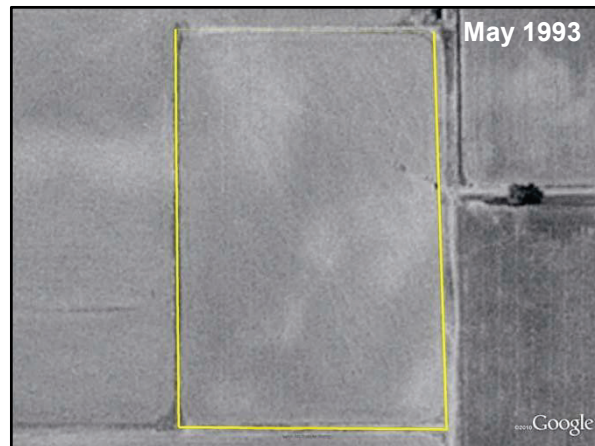












Appendix C: WETS Tables

Sutter County, CA Weather Station: Nicolaus 2 unless otherwise noted*

1993

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	8.34	Wet	3	1	3		Dry = 6-9
2nd	Feb	1.33	4.19	5.36	Wet	3	2	6		Normal = 10-14
most recent	Mar	1.60	3.90	2.28	Normal	2	3	6		Wet = 15-18
Month examined	Apr						Total	15	WET	

1993

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	5.36	Wet	3	1	3		Dry = 6-9
2nd	Mar	1.60	3.90	2.28	Normal	2	2	4		Normal = 10-14
most recent	Apr	0.52	1.54	0.89	Normal	2	3	6		Wet = 15-18
Month examined	May						Total	13	NORMAL	

1993

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	2.28	Normal	2	1	2		Dry = 6-9
2nd	Apr	0.52	1.54	0.89	Normal	2	2	4		Normal = 10-14
most recent	May	0.07	0.67	1.27	Wet	3	3	9		Wet = 15-18
Month examined	Jun						Total	15	WET	

1993

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	0.89	Normal	2	1	2		Dry = 6-9
2nd	May	0.07	0.67	1.27	Wet	3	2	6		Normal = 10-14
most recent	Jun	0.00	0.29	0.65	Wet	3	3	9		Wet = 15-18
Month examined	Jul						Total	17	WET	

1993

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	1.27	Wet	3	1	3		Dry = 6-9
2nd	Jun	0.00	0.29	0.65	Wet	3	2	6		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	15	WET	

1993

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0.65	Wet	3	1	3		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	13	NORMAL	

1993

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	12	NORMAL	

1993

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	0.61	Normal	2	3	6		Wet = 15-18
Month examined	Nov						Total	12	NORMAL	

1993

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	0.61	Normal	2	2	4		Normal = 10-14
most recent	Nov	1.06	3.15	2.49	Normal	2	3	6		Wet = 15-18
Month examined	Dec						Total	12	NORMAL	

1994

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	0.61	Normal	2	1	2		Dry = 6-9
2nd	Nov	1.06	3.15	2.49	Normal	2	2	4		Normal = 10-14
most recent	Dec	1.00	3.54	2.25	Normal	2	3	6		Wet = 15-18
Month examined	Jan						Total	12	NORMAL	

1994

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	2.49	Normal	2	1	2		Dry = 6-9
2nd	Dec	1.00	3.54	2.25	Normal	2	2	4		Normal = 10-14
most recent	Jan	1.90	4.75	2.77	Normal	2	3	6		Wet = 15-18
Month examined	Feb						Total	12	NORMAL	

1994

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	2.25	Normal	2	1	2		Dry = 6-9
2nd	Jan	1.90	4.75	2.77	Normal	2	2	4		Normal = 10-14
most recent	Feb	1.33	4.19	3.45	Normal	2	3	6		Wet = 15-18
Month examined	Mar						Total	12	NORMAL	

1994

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	2.77	Normal	2	1	2		Dry = 6-9
2nd	Feb	1.33	4.19	3.45	Normal	2	2	4		Normal = 10-14
most recent	Mar	1.60	3.90	0.41	Dry	1	3	3		Wet = 15-18
Month examined	Apr						Total	9	DRY	

1994

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	3.45	Normal	2	1	2		Dry = 6-9
2nd	Mar	1.60	3.90	0.41	Dry	1	2	2		Normal = 10-14
most recent	Apr	0.52	1.54	0.73	Normal	2	3	6		Wet = 15-18
Month examined	May						Total	10	NORMAL	

1994

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	0.41	Dry	1	1	1		Dry = 6-9
2nd	Apr	0.52	1.54	0.73	Normal	2	2	4		Normal = 10-14
most recent	May	0.07	0.67	0.66	Normal	2	3	6		Wet = 15-18
Month examined	Jun						Total	11	NORMAL	

1994

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	0.73	Normal	2	1	2		Dry = 6-9
2nd	May	0.07	0.67	0.66	Normal	2	2	4		Normal = 10-14
most recent	Jun	0.00	0.29	0	Normal	2	3	6		Wet = 15-18
Month examined	Jul						Total	12	NORMAL	

1994

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	0.66	Normal	2	1	2		Dry = 6-9
2nd	Jun	0.00	0.29	0	Normal	2	2	4		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	12	NORMAL	

1994

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0	Normal	2	1	2		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	12	NORMAL	

1994

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0.07	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	12	NORMAL	

1994

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0.07	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	0.6	Normal	2	3	6		Wet = 15-18
Month examined	Nov						Total	12	NORMAL	

1994

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0.07	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	0.6	Normal	2	2	4		Normal = 10-14
most recent	Nov	1.06	3.15	4.58	Wet	3	3	9		Wet = 15-18
Month examined	Dec						Total	15	WET	

1995

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	0.6	Normal	2	1	2		Dry = 6-9
2nd	Nov	1.06	3.15	4.58	Wet	3	2	6		Normal = 10-14
most recent	Dec	1.00	3.54	4.48	Wet	3	3	9		Wet = 15-18
Month examined	Jan						Total	17	WET	

1995

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	4.58	Wet	3	1	3		Dry = 6-9
2nd	Dec	1.00	3.54	4.48	Wet	3	2	6		Normal = 10-14
most recent	Jan	1.90	4.75	10.04	Wet	3	3	9		Wet = 15-18
Month examined	Feb						Total	18	WET	

1995

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	4.48	Wet	3	1	3		Dry = 6-9
2nd	Jan	1.90	4.75	10.04	Wet	3	2	6		Normal = 10-14
most recent	Feb	1.33	4.19	0.14	Dry	1	3	3		Wet = 15-18
Month examined	Mar						Total	12	NORMAL	

1995

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	10.04	Wet	3	1	3		Dry = 6-9
2nd	Feb	1.33	4.19	0.14	Dry	1	2	2		Normal = 10-14
most recent	Mar	1.60	3.90	8.14	Wet	3	3	9		Wet = 15-18
Month examined	Apr						Total	14	NORMAL	

1995

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	0.14	Dry	1	1	1		Dry = 6-9
2nd	Mar	1.60	3.90	8.14	Wet	3	2	6		Normal = 10-14
most recent	Apr	0.52	1.54	1.21	Normal	2	3	6		Wet = 15-18
Month examined	May						Total	13	NORMAL	

1995

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	8.14	Wet	3	1	3		Dry = 6-9
2nd	Apr	0.52	1.54	1.21	Normal	2	2	4		Normal = 10-14
most recent	May	0.07	0.67	1.2	Wet	3	3	9		Wet = 15-18
Month examined	Jun						Total	16	WET	

1995

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	1.21	Normal	2	1	2		Dry = 6-9
2nd	May	0.07	0.67	1.2	Wet	3	2	6		Normal = 10-14
most recent	Jun*	0.00	0.29	0.53	Wet	3	3	9		Wet = 15-18
Month examined	Jul						Total	17	WET	

*rainfall data taken from Sacramento Metro AP

1995

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.52	1.54	1.21	Normal	2	1	2		Dry = 6-9
2nd	Jun*	0.07	0.67	1.2	Wet	3	2	6		Normal = 10-14
most recent	Jul*	0.00	0.29	0.53	Wet	3	3	9		Wet = 15-18
Month examined	Aug						Total	17	WET	

*rainfall data taken from Sacramento Metro AP

1995

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun*	0.00	0.29	0.53	Wet	3	1	3		Dry = 6-9
2nd	Jul*	0.00	0.00	0.01	Wet	3	2	6		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	15	WET	

*rainfall data taken from Sacramento Metro AP

1995

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul*	0.00	0.00	0.01	Wet	3	1	3		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	13	NORMAL	

*rainfall data taken from Sacramento Metro AP

1995

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	0	Dry	1	3	3		Wet = 15-18
Month examined	Nov						Total	9	DRY	

1995

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	0	Dry	1	2	2		Normal = 10-14
most recent	Nov	1.06	3.15	0	Dry	1	3	3		Wet = 15-18
Month examined	Dec						Total	7	DRY	

1996

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	0	Dry	1	1	1		Dry = 6-9
2nd	Nov	1.06	3.15	0	Dry	1	2	2		Normal = 10-14
most recent	Dec	1.00	3.54	5.35	Wet	3	3	9		Wet = 15-18
Month examined	Jan						Total	12	NORMAL	

1996

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	0	Dry	1	1	1		Dry = 6-9
2nd	Dec	1.00	3.54	5.35	Wet	3	2	6		Normal = 10-14
most recent	Jan	1.90	4.75	3.29	Normal	2	3	6		Wet = 15-18
Month examined	Feb						Total	13	NORMAL	

1996

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	5.35	Wet	3	1	3		Dry = 6-9
2nd	Jan	1.90	4.75	3.29	Normal	2	2	4		Normal = 10-14
most recent	Feb	1.33	4.19	6.09	Wet	3	3	9		Wet = 15-18
Month examined	Mar						Total	16	WET	

1996

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	3.29	Normal	2	1	2		Dry = 6-9
2nd	Feb	1.33	4.19	6.09	Wet	3	2	6		Normal = 10-14
most recent	Mar	1.60	3.90	2.53	Normal	2	3	6		Wet = 15-18
Month examined	Apr						Total	14	NORMAL	

1996

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	6.09	Wet	3	1	3		Dry = 6-9
2nd	Mar	1.60	3.90	2.53	Normal	2	2	4		Normal = 10-14
most recent	Apr	0.52	1.54	3.25	Wet	3	3	9		Wet = 15-18
Month examined	May						Total	16	WET	

1996

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	2.53	Normal	2	1	2		Dry = 6-9
2nd	Apr	0.52	1.54	3.25	Wet	3	2	6		Normal = 10-14
most recent	May	0.07	0.67	2.43	Wet	3	3	9		Wet = 15-18
Month examined	Jun						Total	17	WET	

1996

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	3.25	Wet	3	1	3		Dry = 6-9
2nd	May	0.07	0.67	2.43	Wet	3	2	6		Normal = 10-14
most recent	Jun	0.00	0.29	0	Normal	2	3	6		Wet = 15-18
Month examined	Jul						Total	15	WET	

1996

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	2.43	Wet	3	1	3		Dry = 6-9
2nd	Jun	0.00	0.29	0	Normal	2	2	4		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	13	NORMAL	

1996

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0	Normal	2	1	2		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	12	NORMAL	

1996

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	12	NORMAL	

1996

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	1.83	Wet	3	3	9		Wet = 15-18
Month examined	Nov						Total	15	WET	

1996

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	1.83	Wet	3	2	6		Normal = 10-14
most recent	Nov	1.06	3.15	1.1	Normal	2	3	6		Wet = 15-18
Month examined	Dec						Total	14	NORMAL	

1997

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	1.83	Wet	3	1	3		Dry = 6-9
2nd	Nov	1.06	3.15	1.1	Normal	2	2	4		Normal = 10-14
most recent	Dec	1.00	3.54	6.72	Wet	3	3	9		Wet = 15-18
Month examined	Jan						Total	16	WET	

1997

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	1.1	Normal	2	1	2		Dry = 6-9
2nd	Dec	1.00	3.54	6.72	Wet	3	2	6		Normal = 10-14
most recent	Jan	1.90	4.75	8.28	Wet	3	3	9		Wet = 15-18
Month examined	Feb						Total	17	WET	

1997

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	6.72	Wet	3	1	3		Dry = 6-9
2nd	Jan	1.90	4.75	8.28	Wet	3	2	6		Normal = 10-14
most recent	Feb	1.33	4.19	0.23	Dry	1	3	3		Wet = 15-18
Month examined	Mar						Total	12	NORMAL	

1997

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	8.28	Wet	3	1	3		Dry = 6-9
2nd	Feb	1.33	4.19	0.23	Dry	1	2	2		Normal = 10-14
most recent	Mar	1.60	3.90	0.98	Dry	1	3	3		Wet = 15-18
Month examined	Apr						Total	8	DRY	

1997

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	0.23	Dry	1	1	1		Dry = 6-9
2nd	Mar	1.60	3.90	0.98	Dry	1	2	2		Normal = 10-14
most recent	Apr	0.52	1.54	0.31	Dry	1	3	3		Wet = 15-18
Month examined	May						Total	6	DRY	

1997

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	0.98	Dry	1	1	1		Dry = 6-9
2nd	Apr	0.52	1.54	0.31	Dry	1	2	2		Normal = 10-14
most recent	May	0.07	0.67	0.52	Normal	2	3	6		Wet = 15-18
Month examined	Jun						Total	9	DRY	

1997

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	0.31	Dry	1	1	1		Dry = 6-9
2nd	May	0.07	0.67	0.52	Normal	2	2	4		Normal = 10-14
most recent	Jun	0.00	0.29	0.75	Wet	3	3	9		Wet = 15-18
Month examined	Jul						Total	14	NORMAL	

1997

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	0.52	Normal	2	1	2		Dry = 6-9
2nd	Jun	0.00	0.29	0.75	Wet	3	2	6		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	14	NORMAL	

1997

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0.75	Wet	3	1	3		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0.24	Wet	3	3	9		Wet = 15-18
Month examined	Sep						Total	16	WET	

1997

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0.24	Wet	3	2	6		Normal = 10-14
most recent	Sep	0.00	0.45	0.32	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	14	NORMAL	

1997

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0.24	Wet	3	1	3		Dry = 6-9
2nd	Sep	0.00	0.45	0.32	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	1.24	Normal	2	3	6		Wet = 15-18
Month examined	Nov						Total	13	NORMAL	

1997

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0.32	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	1.24	Normal	2	2	4		Normal = 10-14
most recent	Nov	1.06	3.15	4.33	Wet	3	3	9		Wet = 15-18
Month examined	Dec						Total	15	WET	

1998

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	1.24	Normal	2	1	2		Dry = 6-9
2nd	Nov	1.06	3.15	4.33	Wet	3	2	6		Normal = 10-14
most recent	Dec	1.00	3.54	2.57	Normal	2	3	6		Wet = 15-18
Month examined	Jan						Total	14	NORMAL	

1998

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	4.33	Wet	3	1	3		Dry = 6-9
2nd	Dec	1.00	3.54	2.57	Normal	2	2	4		Normal = 10-14
most recent	Jan	1.90	4.75	5.96	Wet	3	3	9		Wet = 15-18
Month examined	Feb						Total	16	WET	

1998

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	2.57	Normal	2	1	2		Dry = 6-9
2nd	Jan	1.90	4.75	5.96	Wet	3	2	6		Normal = 10-14
most recent	Feb*	1.33	4.19	9.43	Wet	3	3	9		Wet = 15-18
Month examined	Mar						Total	17	WET	

*rainfall data taken from Sacramento Metro AP

1998

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	5.96	Wet	3	1	3		Dry = 6-9
2nd	Feb*	1.33	4.19	9.43	Wet	3	2	6		Normal = 10-14
most recent	Mar	1.60	3.90	2.07	Normal	2	3	6		Wet = 15-18
Month examined	Apr						Total	15	WET	

*rainfall data taken from Sacramento Metro AP

1998

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb*	1.33	4.19	9.43	Wet	3	1	3		Dry = 6-9
2nd	Mar	1.60	3.90	2.07	Normal	2	2	4		Normal = 10-14
most recent	Apr	0.52	1.54	2.11	Wet	3	3	9		Wet = 15-18
Month examined	May						Total	16	WET	

*rainfall data taken from Sacramento Metro AP

1998

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	2.07	Normal	2	1	2		Dry = 6-9
2nd	Apr	0.52	1.54	2.11	Wet	3	2	6		Normal = 10-14
most recent	May	0.07	0.67	2.45	Wet	3	3	9		Wet = 15-18
Month examined	Jun						Total	17	WET	

1998

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	2.11	Wet	3	1	3		Dry = 6-9
2nd	May	0.07	0.67	2.45	Wet	3	2	6		Normal = 10-14
most recent	Jun	0.00	0.29	0.02	Normal	2	3	6		Wet = 15-18
Month examined	Jul						Total	15	WET	

1998

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	2.45	Wet	3	1	3		Dry = 6-9
2nd	Jun	0.00	0.29	0.02	Normal	2	2	4		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	13	NORMAL	

1998

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0.02	Normal	2	1	2		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	12	NORMAL	

1998

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0.38	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	12	NORMAL	

1998

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0.38	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	1.09	Normal	2	3	6		Wet = 15-18
Month examined	Nov						Total	12	NORMAL	

1998

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0.38	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	1.09	Normal	2	2	4		Normal = 10-14
most recent	Nov	1.06	3.15	2.45	Normal	2	3	6		Wet = 15-18
Month examined	Dec						Total	12	NORMAL	

1999

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	1.09	Normal	2	1	2		Dry = 6-9
2nd	Nov	1.06	3.15	2.45	Normal	2	2	4		Normal = 10-14
most recent	Dec	1.00	3.54	1.53	Normal	2	3	6		Wet = 15-18
Month examined	Jan						Total	12	NORMAL	

1999

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	2.45	Normal	2	1	2		Dry = 6-9
2nd	Dec	1.00	3.54	1.53	Normal	2	2	4		Normal = 10-14
most recent	Jan	1.90	4.75	2.85	Normal	2	3	6		Wet = 15-18
Month examined	Feb						Total	12	NORMAL	

1999

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	1.53	Normal	2	1	2		Dry = 6-9
2nd	Jan	1.90	4.75	2.85	Normal	2	2	4		Normal = 10-14
most recent	Feb	1.33	4.19	3.77	Normal	2	3	6		Wet = 15-18
Month examined	Mar						Total	12	NORMAL	

1999

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	2.85	Normal	2	1	2		Dry = 6-9
2nd	Feb	1.33	4.19	3.77	Normal	2	2	4		Normal = 10-14
most recent	Mar	1.60	3.90	1.48	Dry	1	3	3		Wet = 15-18
Month examined	Apr						Total	9	DRY	

1999

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	3.77	Normal	2	1	2		Dry = 6-9
2nd	Mar	1.60	3.90	1.48	Dry	1	2	2		Normal = 10-14
most recent	Apr	0.52	1.54	1.34	Normal	2	3	6		Wet = 15-18
Month examined	May						Total	10	NORMAL	

1999

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	1.48	Dry	1	1	1		Dry = 6-9
2nd	Apr	0.52	1.54	1.34	Normal	2	2	4		Normal = 10-14
most recent	May	0.07	0.67	0.09	Normal	2	3	6		Wet = 15-18
Month examined	Jun						Total	11	NORMAL	

1999

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	1.34	Normal	2	1	2		Dry = 6-9
2nd	May	0.07	0.67	0.09	Normal	2	2	4		Normal = 10-14
most recent	Jun	0.00	0.29	0.02	Normal	2	3	6		Wet = 15-18
Month examined	Jul						Total	12	NORMAL	

1999

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	0.09	Normal	2	1	2		Dry = 6-9
2nd	Jun	0.00	0.29	0.02	Normal	2	2	4		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	12	NORMAL	

1999

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0.02	Normal	2	1	2		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	12	NORMAL	

1999

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	12	NORMAL	

1999

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	0.23	Dry	1	3	3		Wet = 15-18
Month examined	Nov						Total	9	DRY	

1999

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	0.23	Dry	1	2	2		Normal = 10-14
most recent	Nov	1.06	3.15	1.49	Normal	2	3	6		Wet = 15-18
Month examined	Dec						Total	10	NORMAL	

2000

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	0.23	Dry	1	1	1		Dry = 6-9
2nd	Nov	1.06	3.15	1.49	Normal	2	2	4		Normal = 10-14
most recent	Dec	1.00	3.54	0.29	Dry	1	3	3		Wet = 15-18
Month examined	Jan						Total	8	DRY	

2000

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	1.49	Normal	2	1	2		Dry = 6-9
2nd	Dec	1.00	3.54	0.29	Dry	1	2	2		Normal = 10-14
most recent	Jan	1.90	4.75	2.09	Normal	2	3	6		Wet = 15-18
Month examined	Feb						Total	10	NORMAL	

2000

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	0.29	Dry	1	1	1		Dry = 6-9
2nd	Jan	1.90	4.75	2.09	Normal	2	2	4		Normal = 10-14
most recent	Feb	1.33	4.19	7.12	Wet	3	3	9		Wet = 15-18
Month examined	Mar						Total	14	NORMAL	

2000

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	2.09	Normal	2	1	2		Dry = 6-9
2nd	Feb	1.33	4.19	7.12	Wet	3	2	6		Normal = 10-14
most recent	Mar	1.60	3.90	2.28	Normal	2	3	6		Wet = 15-18
Month examined	Apr						Total	14	NORMAL	

2000

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	7.12	Wet	3	1	3		Dry = 6-9
2nd	Mar	1.60	3.90	2.28	Normal	2	2	4		Normal = 10-14
most recent	Apr	0.52	1.54	1.58	Wet	3	3	9		Wet = 15-18
Month examined	May						Total	16	WET	

2000

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	2.28	Normal	2	1	2		Dry = 6-9
2nd	Apr	0.52	1.54	1.58	Wet	3	2	6		Normal = 10-14
most recent	May	0.07	0.67	1.12	Wet	3	3	9		Wet = 15-18
Month examined	Jun						Total	17	WET	

2000

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	1.58	Wet	3	1	3		Dry = 6-9
2nd	May	0.07	0.67	1.12	Wet	3	2	6		Normal = 10-14
most recent	Jun	0.00	0.29	0.09	Normal	2	3	6		Wet = 15-18
Month examined	Jul						Total	15	WET	

2000

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	1.12	Wet	3	1	3		Dry = 6-9
2nd	Jun	0.00	0.29	0.09	Normal	2	2	4		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	13	NORMAL	

2000

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0.09	Normal	2	1	2		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	12	NORMAL	

2000

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0.22	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	12	NORMAL	

2000

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0.22	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	1.73	Wet	3	3	9		Wet = 15-18
Month examined	Nov						Total	15	WET	

2000

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0.22	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	1.73	Wet	3	2	6		Normal = 10-14
most recent	Nov	1.06	3.15	0.75	Dry	1	3	3		Wet = 15-18
Month examined	Dec						Total	11	NORMAL	

2001

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	1.73	Wet	3	1	3		Dry = 6-9
2nd	Nov	1.06	3.15	0.75	Dry	1	2	2		Normal = 10-14
most recent	Dec	1.00	3.54	0.38	Dry	1	3	3		Wet = 15-18
Month examined	Jan						Total	8	DRY	

2001

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	0.75	Dry	1	1	1		Dry = 6-9
2nd	Dec	1.00	3.54	0.38	Dry	1	2	2		Normal = 10-14
most recent	Jan	1.90	4.75	3.69	Normal	2	3	6		Wet = 15-18
Month examined	Feb						Total	9	DRY	

2001

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	0.38	Dry	1	1	1		Dry = 6-9
2nd	Jan	1.90	4.75	3.69	Normal	2	2	4		Normal = 10-14
most recent	Feb	1.33	4.19	4.28	Wet	3	3	9		Wet = 15-18
Month examined	Mar						Total	14	NORMAL	

2001

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	3.69	Normal	2	1	2		Dry = 6-9
2nd	Feb	1.33	4.19	4.28	Wet	3	2	6		Normal = 10-14
most recent	Mar	1.60	3.90	1.87	Normal	2	3	6		Wet = 15-18
Month examined	Apr						Total	14	NORMAL	

2001

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	4.28	Wet	3	1	3		Dry = 6-9
2nd	Mar	1.60	3.90	1.87	Normal	2	2	4		Normal = 10-14
most recent	Apr	0.52	1.54	0.88	Normal	2	3	6		Wet = 15-18
Month examined	May						Total	13	NORMAL	

2001

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	1.87	Normal	2	1	2		Dry = 6-9
2nd	Apr	0.52	1.54	0.88	Normal	2	2	4		Normal = 10-14
most recent	May	0.07	0.67	0	Dry	1	3	3		Wet = 15-18
Month examined	Jun						Total	9	DRY	

2001

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	0.88	Normal	2	1	2		Dry = 6-9
2nd	May	0.07	0.67	0	Dry	1	2	2		Normal = 10-14
most recent	Jun	0.00	0.29	0.12	Normal	2	3	6		Wet = 15-18
Month examined	Jul						Total	10	NORMAL	

2001

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	0	Dry	1	1	1		Dry = 6-9
2nd	Jun	0.00	0.29	0.12	Normal	2	2	4		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	11	NORMAL	

2001

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0.12	Normal	2	1	2		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	12	NORMAL	

2001

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0.23	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	12	NORMAL	

2001

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0.23	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	0.5	Normal	2	3	6		Wet = 15-18
Month examined	Nov						Total	12	NORMAL	

2001

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0.23	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	0.5	Normal	2	2	4		Normal = 10-14
most recent	Nov	1.06	3.15	2.59	Normal	2	3	6		Wet = 15-18
Month examined	Dec						Total	12	NORMAL	

2002

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	0.5	Normal	2	1	2		Dry = 6-9
2nd	Nov	1.06	3.15	2.59	Normal	2	2	4		Normal = 10-14
most recent	Dec	1.00	3.54	5.67	Wet	3	3	9		Wet = 15-18
Month examined	Jan						Total	15	WET	

2002

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	2.59	Normal	2	1	2		Dry = 6-9
2nd	Dec	1.00	3.54	5.67	Wet	3	2	6		Normal = 10-14
most recent	Jan	1.90	4.75	2.24	Normal	2	3	6		Wet = 15-18
Month examined	Feb						Total	14	NORMAL	

2002

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	5.67	Wet	3	1	3		Dry = 6-9
2nd	Jan	1.90	4.75	2.24	Normal	2	2	4		Normal = 10-14
most recent	Feb	1.33	4.19	0.74	Dry	1	3	3		Wet = 15-18
Month examined	Mar						Total	10	NORMAL	

2002

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	2.24	Normal	2	1	2		Dry = 6-9
2nd	Feb	1.33	4.19	0.74	Dry	1	2	2		Normal = 10-14
most recent	Mar	1.60	3.90	2.77	Normal	2	3	6		Wet = 15-18
Month examined	Apr						Total	10	NORMAL	

2002

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	0.74	Dry	1	1	1		Dry = 6-9
2nd	Mar	1.60	3.90	2.77	Normal	2	2	4		Normal = 10-14
most recent	Apr	0.52	1.54	0.23	Dry	1	3	3		Wet = 15-18
Month examined	May						Total	8	DRY	

2002

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	2.77	Normal	2	1	2		Dry = 6-9
2nd	Apr	0.52	1.54	0.23	Dry	1	2	2		Normal = 10-14
most recent	May	0.07	0.67	1.37	Wet	3	3	9		Wet = 15-18
Month examined	Jun						Total	13	NORMAL	

2002

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	0.23	Dry	1	1	1		Dry = 6-9
2nd	May	0.07	0.67	1.37	Wet	3	2	6		Normal = 10-14
most recent	Jun*	0.00	0.29	0	Normal	2	3	6		Wet = 15-18
Month examined	Jul						Total	13	NORMAL	

*rainfall data taken from Sacramento Metro AP

2002

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	1.37	Wet	3	1	3		Dry = 6-9
2nd	Jun*	0.00	0.29	0	Normal	2	2	4		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	13	NORMAL	

*rainfall data taken from Sacramento Metro AP

2002

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun*	0.00	0.29	0	Normal	2	1	2		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	12	NORMAL	

*rainfall data taken from Sacramento Metro AP

2002

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	12	NORMAL	

2002

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	0	Dry	1	3	3		Wet = 15-18
Month examined	Nov						Total	9	DRY	

2002

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	0	Dry	1	2	2		Normal = 10-14
most recent	Nov	1.06	3.15	1.92	Normal	2	3	6		Wet = 15-18
Month examined	Dec						Total	10	NORMAL	

2003

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	0	Dry	1	1	1		Dry = 6-9
2nd	Nov	1.06	3.15	1.92	Normal	2	2	4		Normal = 10-14
most recent	Dec	1.00	3.54	6.19	Wet	3	3	9		Wet = 15-18
Month examined	Jan						Total	14	NORMAL	

2003

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	1.92	Normal	2	1	2		Dry = 6-9
2nd	Dec	1.00	3.54	6.19	Wet	3	2	6		Normal = 10-14
most recent	Jan	1.90	4.75	2.29	Normal	2	3	6		Wet = 15-18
Month examined	Feb						Total	14	NORMAL	

2003

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	6.19	Wet	3	1	3		Dry = 6-9
2nd	Jan	1.90	4.75	2.29	Normal	2	2	4		Normal = 10-14
most recent	Feb	1.33	4.19	1.31	Dry	1	3	3		Wet = 15-18
Month examined	Mar						Total	10	NORMAL	

2003

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	2.29	Normal	2	1	2		Dry = 6-9
2nd	Feb	1.33	4.19	1.31	Dry	1	2	2		Normal = 10-14
most recent	Mar	1.60	3.90	2.51	Normal	2	3	6		Wet = 15-18
Month examined	Apr						Total	10	NORMAL	

2003

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	1.31	Dry	1	1	1		Dry = 6-9
2nd	Mar	1.60	3.90	2.51	Normal	2	2	4		Normal = 10-14
most recent	Apr	0.52	1.54	2.93	Wet	3	3	9		Wet = 15-18
Month examined	May						Total	14	NORMAL	

2003

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	2.51	Normal	2	1	2		Dry = 6-9
2nd	Apr	0.52	1.54	2.93	Wet	3	2	6		Normal = 10-14
most recent	May	0.07	0.67	1.04	Wet	3	3	9		Wet = 15-18
Month examined	Jun						Total	17	WET	

2003

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	2.93	Wet	3	1	3		Dry = 6-9
2nd	May	0.07	0.67	1.04	Wet	3	2	6		Normal = 10-14
most recent	Jun	0.00	0.29	0	Normal	2	3	6		Wet = 15-18
Month examined	Jul						Total	15	WET	

2003

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	1.04	Wet	3	1	3		Dry = 6-9
2nd	Jun	0.00	0.29	0	Normal	2	2	4		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	13	NORMAL	

2003

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0	Normal	2	1	2		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0.4	Wet	3	3	9		Wet = 15-18
Month examined	Sep						Total	15	WET	

2003

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0.4	Wet	3	2	6		Normal = 10-14
most recent	Sep	0.00	0.45	0	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	14	NORMAL	

2003

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0.4	Wet	3	1	3		Dry = 6-9
2nd	Sep	0.00	0.45	0	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	0	Dry	1	3	3		Wet = 15-18
Month examined	Nov						Total	10	NORMAL	

2003

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	0	Dry	1	2	2		Normal = 10-14
most recent	Nov	1.06	3.15	2.09	Normal	2	3	6		Wet = 15-18
Month examined	Dec						Total	10	NORMAL	

2004

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	0	Dry	1	1	1		Dry = 6-9
2nd	Nov	1.06	3.15	2.09	Normal	2	2	4		Normal = 10-14
most recent	Dec	1.00	3.54	4.5	Wet	3	3	9		Wet = 15-18
Month examined	Jan						Total	14	NORMAL	

2004

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	2.09	Normal	2	1	2		Dry = 6-9
2nd	Dec	1.00	3.54	4.5	Wet	3	2	6		Normal = 10-14
most recent	Jan	1.90	4.75	2.28	Normal	2	3	6		Wet = 15-18
Month examined	Feb						Total	14	NORMAL	

2004

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	4.5	Wet	3	1	3		Dry = 6-9
2nd	Jan	1.90	4.75	2.28	Normal	2	2	4		Normal = 10-14
most recent	Feb	1.33	4.19	5.05	Wet	3	3	9		Wet = 15-18
Month examined	Mar						Total	16	WET	

2004

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	2.28	Normal	2	1	2		Dry = 6-9
2nd	Feb	1.33	4.19	5.05	Wet	3	2	6		Normal = 10-14
most recent	Mar	1.60	3.90	0.99	Dry	1	3	3		Wet = 15-18
Month examined	Apr						Total	11	NORMAL	

2004

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	5.05	Wet	3	1	3		Dry = 6-9
2nd	Mar	1.60	3.90	0.99	Dry	1	2	2		Normal = 10-14
most recent	Apr	0.52	1.54	0.11	Dry	1	3	3		Wet = 15-18
Month examined	May						Total	8	DRY	

2004

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	0.99	Dry	1	1	1		Dry = 6-9
2nd	Apr	0.52	1.54	0.11	Dry	1	2	2		Normal = 10-14
most recent	May	0.07	0.67	0.04	Dry	1	3	3		Wet = 15-18
Month examined	Jun						Total	6	DRY	

2004

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	0.11	Dry	1	1	1		Dry = 6-9
2nd	May	0.07	0.67	0.04	Dry	1	2	2		Normal = 10-14
most recent	Jun	0.00	0.29	0	Normal	2	3	6		Wet = 15-18
Month examined	Jul						Total	9	DRY	

2004

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	0.04	Dry	1	1	1		Dry = 6-9
2nd	Jun	0.00	0.29	0	Normal	2	2	4		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	11	NORMAL	

2004

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0	Normal	2	1	2		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	12	NORMAL	

2004

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	12	NORMAL	

2004

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	2.24	Wet	3	3	9		Wet = 15-18
Month examined	Nov						Total	15	WET	

2004

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	2.24	Wet	3	2	6		Normal = 10-14
most recent	Nov	1.06	3.15	3.06	Normal	2	3	6		Wet = 15-18
Month examined	Dec						Total	14	NORMAL	

2005

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	2.24	Wet	3	1	3		Dry = 6-9
2nd	Nov	1.06	3.15	3.06	Normal	2	2	4		Normal = 10-14
most recent	Dec	1.00	3.54	2.88	Normal	2	3	6		Wet = 15-18
Month examined	Jan						Total	13	NORMAL	

2005

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	3.06	Normal	2	1	2		Dry = 6-9
2nd	Dec	1.00	3.54	2.88	Normal	2	2	4		Normal = 10-14
most recent	Jan	1.90	4.75	3.89	Normal	2	3	6		Wet = 15-18
Month examined	Feb						Total	12	NORMAL	

2005

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	2.88	Normal	2	1	2		Dry = 6-9
2nd	Jan	1.90	4.75	3.89	Normal	2	2	4		Normal = 10-14
most recent	Feb	1.33	4.19	2.58	Normal	2	3	6		Wet = 15-18
Month examined	Mar						Total	12	NORMAL	

2005

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	3.89	Normal	2	1	2		Dry = 6-9
2nd	Feb	1.33	4.19	2.58	Normal	2	2	4		Normal = 10-14
most recent	Mar	1.60	3.90	1.95	Normal	2	3	6		Wet = 15-18
Month examined	Apr						Total	12	NORMAL	

2005

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	2.58	Normal	2	1	2		Dry = 6-9
2nd	Mar	1.60	3.90	1.95	Normal	2	2	4		Normal = 10-14
most recent	Apr	0.52	1.54	1.01	Normal	2	3	6		Wet = 15-18
Month examined	May						Total	12	NORMAL	

2005

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	1.95	Normal	2	1	2		Dry = 6-9
2nd	Apr	0.52	1.54	1.01	Normal	2	2	4		Normal = 10-14
most recent	May	0.07	0.67	1.71	Wet	3	3	9		Wet = 15-18
Month examined	Jun						Total	15	WET	

2005

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	1.01	Normal	2	1	2		Dry = 6-9
2nd	May	0.07	0.67	1.71	Wet	3	2	6		Normal = 10-14
most recent	Jun*	0.00	0.29	0.55	Wet	3	3	9		Wet = 15-18
Month examined	Jul						Total	17	WET	

*rainfall data taken from Sacramento Metro AP

2005

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	1.71	Wet	3	1	3		Dry = 6-9
2nd	Jun*	0.00	0.29	0.55	Wet	3	2	6		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	15	WET	

2005

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun*	0.00	0.29	0.55	Wet	3	1	3		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	13	NORMAL	

*rainfall data taken from Sacramento Metro AP

2005

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0.08	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	12	NORMAL	

2005

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0.08	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	0.32	Dry	1	3	3		Wet = 15-18
Month examined	Nov						Total	9	DRY	

2005

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0.08	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	0.32	Dry	1	2	2		Normal = 10-14
most recent	Nov	1.06	3.15	2.32	Normal	2	3	6		Wet = 15-18
Month examined	Dec						Total	10	NORMAL	

2006

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	0.32	Dry	1	1	1		Dry = 6-9
2nd	Nov	1.06	3.15	2.32	Normal	2	2	4		Normal = 10-14
most recent	Dec	1.00	3.54	7.62	Wet	3	3	9		Wet = 15-18
Month examined	Jan						Total	14	NORMAL	

2006

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	2.32	Normal	2	1	2		Dry = 6-9
2nd	Dec	1.00	3.54	7.62	Wet	3	2	6		Normal = 10-14
most recent	Jan	1.90	4.75	2.14	Normal	2	3	6		Wet = 15-18
Month examined	Feb						Total	14	NORMAL	

2006

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	7.62	Wet	3	1	3		Dry = 6-9
2nd	Jan	1.90	4.75	2.14	Normal	2	2	4		Normal = 10-14
most recent	Feb	1.33	4.19	2.07	Normal	2	3	6		Wet = 15-18
Month examined	Mar						Total	13	NORMAL	

2006

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	2.14	Normal	2	1	2		Dry = 6-9
2nd	Feb	1.33	4.19	2.07	Normal	2	2	4		Normal = 10-14
most recent	Mar	1.60	3.90	4.69	Wet	3	3	9		Wet = 15-18
Month examined	Apr						Total	15	WET	

2006

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	2.07	Normal	2	1	2		Dry = 6-9
2nd	Mar	1.60	3.90	4.69	Wet	3	2	6		Normal = 10-14
most recent	Apr	0.52	1.54	3.63	Wet	3	3	9		Wet = 15-18
Month examined	May						Total	17	WET	

2006

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	4.69	Wet	3	1	3		Dry = 6-9
2nd	Apr	0.52	1.54	3.63	Wet	3	2	6		Normal = 10-14
most recent	May	0.07	0.67	0.52	Normal	2	3	6		Wet = 15-18
Month examined	Jun						Total	15	WET	

2006

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	3.63	Wet	3	1	3		Dry = 6-9
2nd	May	0.07	0.67	0.52	Normal	2	2	4		Normal = 10-14
most recent	Jun	0.00	0.29	0	Normal	2	3	6		Wet = 15-18
Month examined	Jul						Total	13	NORMAL	

2006

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	0.52	Normal	2	1	2		Dry = 6-9
2nd	Jun	0.00	0.29	0	Normal	2	2	4		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	12	NORMAL	

2006

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0	Normal	2	1	2		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	12	NORMAL	

2006

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	12	NORMAL	

2006

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	0.1	Dry	1	3	3		Wet = 15-18
Month examined	Nov						Total	9	DRY	

2006

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	0.1	Dry	1	2	2		Normal = 10-14
most recent	Nov	1.06	3.15	1.55	Normal	2	3	6		Wet = 15-18
Month examined	Dec						Total	10	NORMAL	

2007

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	0.1	Dry	1	1	1		Dry = 6-9
2nd	Nov	1.06	3.15	1.55	Normal	2	2	4		Normal = 10-14
most recent	Dec	1.00	3.54	3.34	Normal	2	3	6		Wet = 15-18
Month examined	Jan						Total	11	NORMAL	

2007

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	1.55	Normal	2	1	2		Dry = 6-9
2nd	Dec	1.00	3.54	3.34	Normal	2	2	4		Normal = 10-14
most recent	Jan	1.90	4.75	0.03	Dry	1	3	3		Wet = 15-18
Month examined	Feb						Total	9	DRY	

2007

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	3.34	Normal	2	1	2		Dry = 6-9
2nd	Jan	1.90	4.75	0.03	Dry	1	2	2		Normal = 10-14
most recent	Feb	1.33	4.19	3.11	Normal	2	3	6		Wet = 15-18
Month examined	Mar						Total	10	NORMAL	

2007

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	0.03	Dry	1	1	1		Dry = 6-9
2nd	Feb	1.33	4.19	3.11	Normal	2	2	4		Normal = 10-14
most recent	Mar	1.60	3.90	0.33	Dry	1	3	3		Wet = 15-18
Month examined	Apr						Total	8	DRY	

2007

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	3.11	Normal	2	1	2		Dry = 6-9
2nd	Mar	1.60	3.90	0.33	Dry	1	2	2		Normal = 10-14
most recent	Apr	0.52	1.54	1.1	Normal	2	3	6		Wet = 15-18
Month examined	May						Total	10	NORMAL	

2007

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	0.33	Dry	1	1	1		Dry = 6-9
2nd	Apr	0.52	1.54	1.1	Normal	2	2	4		Normal = 10-14
most recent	May	0.07	0.67	0.17	Normal	2	3	6		Wet = 15-18
Month examined	Jun						Total	11	NORMAL	

2007

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	1.1	Normal	2	1	2		Dry = 6-9
2nd	May	0.07	0.67	0.17	Normal	2	2	4		Normal = 10-14
most recent	Jun	0.00	0.29	0	Normal	2	3	6		Wet = 15-18
Month examined	Jul						Total	12	NORMAL	

2007

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	0.17	Normal	2	1	2		Dry = 6-9
2nd	Jun	0.00	0.29	0	Normal	2	2	4		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	12	NORMAL	

2007

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0	Normal	2	1	2		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	12	NORMAL	

2007

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0.31	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	12	NORMAL	

2007

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0.31	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	1.55	Wet	3	3	9		Wet = 15-18
Month examined	Nov						Total	15	WET	

2007

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0.31	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	1.55	Wet	3	2	6		Normal = 10-14
most recent	Nov	1.06	3.15	0.73	Dry	1	3	3		Wet = 15-18
Month examined	Dec						Total	11	NORMAL	

2008

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	1.55	Wet	3	1	3		Dry = 6-9
2nd	Nov	1.06	3.15	0.73	Dry	1	2	2		Normal = 10-14
most recent	Dec	1.00	3.54	3.4	Normal	2	3	6		Wet = 15-18
Month examined	Jan						Total	11	NORMAL	

2008

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	0.73	Dry	1	1	1		Dry = 6-9
2nd	Dec	1.00	3.54	3.4	Normal	2	2	4		Normal = 10-14
most recent	Jan	1.90	4.75	6.89	Wet	3	3	9		Wet = 15-18
Month examined	Feb						Total	14	NORMAL	

2008

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	3.4	Normal	2	1	2		Dry = 6-9
2nd	Jan	1.90	4.75	6.89	Wet	3	2	6		Normal = 10-14
most recent	Feb	1.33	4.19	2.02	Normal	2	3	6		Wet = 15-18
Month examined	Mar						Total	14	NORMAL	

2008

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	6.89	Wet	3	1	3		Dry = 6-9
2nd	Feb	1.33	4.19	2.02	Normal	2	2	4		Normal = 10-14
most recent	Mar	1.60	3.90	0.22	Dry	1	3	3		Wet = 15-18
Month examined	Apr						Total	10	NORMAL	

2008

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	2.02	Normal	2	1	2		Dry = 6-9
2nd	Mar	1.60	3.90	0.22	Dry	1	2	2		Normal = 10-14
most recent	Apr	0.52	1.54	0.05	Dry	1	3	3		Wet = 15-18
Month examined	May						Total	7	DRY	

2008

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	0.22	Dry	1	1	1		Dry = 6-9
2nd	Apr	0.52	1.54	0.05	Dry	1	2	2		Normal = 10-14
most recent	May	0.07	0.67	0.03	Dry	1	3	3		Wet = 15-18
Month examined	Jun						Total	6	DRY	

2008

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	0.05	Dry	1	1	1		Dry = 6-9
2nd	May	0.07	0.67	0.03	Dry	1	2	2		Normal = 10-14
most recent	Jun	0.00	0.29	0	Normal	2	3	6		Wet = 15-18
Month examined	Jul						Total	9	DRY	

2008

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	0.03	Dry	1	1	1		Dry = 6-9
2nd	Jun	0.00	0.29	0	Normal	2	2	4		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	11	NORMAL	

2008

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0	Normal	2	1	2		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	12	NORMAL	

2008

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	12	NORMAL	

2008

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	0.45	Normal	2	3	6		Wet = 15-18
Month examined	Nov						Total	12	NORMAL	

2008

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	0.45	Normal	2	2	4		Normal = 10-14
most recent	Nov	1.06	3.15	2.64	Normal	2	3	6		Wet = 15-18
Month examined	Dec						Total	12	NORMAL	

2009

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	0.45	Normal	2	1	2		Dry = 6-9
2nd	Nov	1.06	3.15	2.64	Normal	2	2	4		Normal = 10-14
most recent	Dec	1.00	3.54	1.95	Normal	2	3	6		Wet = 15-18
Month examined	Jan						Total	12	NORMAL	

2009

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	2.64	Normal	2	1	2		Dry = 6-9
2nd	Dec	1.00	3.54	1.95	Normal	2	2	4		Normal = 10-14
most recent	Jan	1.90	4.75	1.13	Dry	1	3	3		Wet = 15-18
Month examined	Feb						Total	9	DRY	

2009

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	1.95	Normal	2	1	2		Dry = 6-9
2nd	Jan	1.90	4.75	1.13	Dry	1	2	2		Normal = 10-14
most recent	Feb	1.33	4.19	4.13	Normal	2	3	6		Wet = 15-18
Month examined	Mar						Total	10	NORMAL	

2009

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	1.13	Dry	1	1	1		Dry = 6-9
2nd	Feb	1.33	4.19	4.13	Normal	2	2	4		Normal = 10-14
most recent	Mar	1.60	3.90	1.57	Dry	1	3	3		Wet = 15-18
Month examined	Apr						Total	8	DRY	

2009

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	4.13	Normal	2	1	2		Dry = 6-9
2nd	Mar	1.60	3.90	1.57	Dry	1	2	2		Normal = 10-14
most recent	Apr	0.52	1.54	0.47	Dry	1	3	3		Wet = 15-18
Month examined	May						Total	7	DRY	

2009

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	1.57	Dry	1	1	1		Dry = 6-9
2nd	Apr	0.52	1.54	0.47	Dry	1	2	2		Normal = 10-14
most recent	May	0.07	0.67	1.36	Wet	3	3	9		Wet = 15-18
Month examined	Jun						Total	12	NORMAL	

2009

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	0.47	Dry	1	1	1		Dry = 6-9
2nd	May	0.07	0.67	1.36	Wet	3	2	6		Normal = 10-14
most recent	Jun	0.00	0.29	0.09	Normal	2	3	6		Wet = 15-18
Month examined	Jul						Total	13	NORMAL	

2009

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	1.36	Wet	3	1	3		Dry = 6-9
2nd	Jun	0.00	0.29	0.09	Normal	2	2	4		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	13	NORMAL	

2009

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0.09	Normal	2	1	2		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	12	NORMAL	

2009

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0.16	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	12	NORMAL	

2009

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0.16	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	2.27	Wet	3	3	9		Wet = 15-18
Month examined	Nov						Total	15	WET	

2009

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0.16	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	2.27	Wet	3	2	6		Normal = 10-14
most recent	Nov	1.06	3.15	0.73	Dry	1	3	3		Wet = 15-18
Month examined	Dec						Total	11	NORMAL	

2010

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	2.27	Wet	3	1	3		Dry = 6-9
2nd	Nov	1.06	3.15	0.73	Dry	1	2	2		Normal = 10-14
most recent	Dec	1.00	3.54	1.67	Normal	2	3	6		Wet = 15-18
Month examined	Jan						Total	11	NORMAL	

2010

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	0.73	Dry	1	1	1		Dry = 6-9
2nd	Dec	1.00	3.54	1.67	Normal	2	2	4		Normal = 10-14
most recent	Jan	1.90	4.75	5.14	Wet	3	3	9		Wet = 15-18
Month examined	Feb						Total	14	NORMAL	

2010

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	1.67	Normal	2	1	2		Dry = 6-9
2nd	Jan	1.90	4.75	5.14	Wet	3	2	6		Normal = 10-14
most recent	Feb	1.33	4.19	2.18	Normal	2	3	6		Wet = 15-18
Month examined	Mar						Total	14	NORMAL	

2010

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	5.14	Wet	3	1	3		Dry = 6-9
2nd	Feb	1.33	4.19	2.18	Normal	2	2	4		Normal = 10-14
most recent	Mar	1.60	3.90	1.89	Normal	2	3	6		Wet = 15-18
Month examined	Apr						Total	13	NORMAL	

2010

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	2.18	Normal	2	1	2		Dry = 6-9
2nd	Mar	1.60	3.90	1.89	Normal	2	2	4		Normal = 10-14
most recent	Apr	0.52	1.54	2.11	Wet	3	3	9		Wet = 15-18
Month examined	May						Total	15	WET	

2010

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	1.89	Normal	2	1	2		Dry = 6-9
2nd	Apr	0.52	1.54	2.11	Wet	3	2	6		Normal = 10-14
most recent	May	0.07	0.67	0.62	Normal	2	3	6		Wet = 15-18
Month examined	Jun						Total	14	NORMAL	

2010

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	2.11	Wet	3	1	3		Dry = 6-9
2nd	May	0.07	0.67	0.62	Normal	2	2	4		Normal = 10-14
most recent	Jun	0.00	0.29	0	Normal	2	3	6		Wet = 15-18
Month examined	Jul						Total	13	NORMAL	

2010

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	0.62	Normal	2	1	2		Dry = 6-9
2nd	Jun	0.00	0.29	0	Normal	2	2	4		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	12	NORMAL	

2010

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0	Normal	2	1	2		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0.01	Wet	3	3	9		Wet = 15-18
Month examined	Sep						Total	15	WET	

2010

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0.01	Wet	3	2	6		Normal = 10-14
most recent	Sep	0.00	0.45	0.03	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	14	NORMAL	

2010

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0.01	Wet	3	1	3		Dry = 6-9
2nd	Sep	0.00	0.45	0.03	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	1.28	Normal	2	3	6		Wet = 15-18
Month examined	Nov						Total	13	NORMAL	

2010

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0.03	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	1.28	Normal	2	2	4		Normal = 10-14
most recent	Nov	1.06	3.15	2.69	Normal	2	3	6		Wet = 15-18
Month examined	Dec						Total	12	NORMAL	

2011

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	1.28	Normal	2	1	2		Dry = 6-9
2nd	Nov	1.06	3.15	2.69	Normal	2	2	4		Normal = 10-14
most recent	Dec	1.00	3.54	6.38	Wet	3	3	9		Wet = 15-18
Month examined	Jan						Total	15	WET	

2011

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	2.69	Normal	2	1	2		Dry = 6-9
2nd	Dec	1.00	3.54	6.38	Wet	3	2	6		Normal = 10-14
most recent	Jan	1.90	4.75	0.97	Dry	1	3	3		Wet = 15-18
Month examined	Feb						Total	11	NORMAL	

2011

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	6.38	Wet	3	1	3		Dry = 6-9
2nd	Jan	1.90	4.75	0.97	Dry	1	2	2		Normal = 10-14
most recent	Feb	1.33	4.19	3.67	Normal	2	3	6		Wet = 15-18
Month examined	Mar						Total	11	NORMAL	

2011

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	0.97	Dry	1	1	1		Dry = 6-9
2nd	Feb	1.33	4.19	3.67	Normal	2	2	4		Normal = 10-14
most recent	Mar	1.60	3.90	7.07	Wet	3	3	9		Wet = 15-18
Month examined	Apr						Total	14	NORMAL	

2011

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	3.67	Normal	2	1	2		Dry = 6-9
2nd	Mar	1.60	3.90	7.07	Wet	3	2	6		Normal = 10-14
most recent	Apr	0.52	1.54	0.09	Dry	1	3	3		Wet = 15-18
Month examined	May						Total	11	NORMAL	

2011

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	7.07	Wet	3	1	3		Dry = 6-9
2nd	Apr	0.52	1.54	0.09	Dry	1	2	2		Normal = 10-14
most recent	May	0.07	0.67	1.79	Wet	3	3	9		Wet = 15-18
Month examined	Jun						Total	14	NORMAL	

2011

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	0.09	Dry	1	1	1		Dry = 6-9
2nd	May	0.07	0.67	1.79	Wet	3	2	6		Normal = 10-14
most recent	Jun	0.00	0.29	1.57	Wet	3	3	9		Wet = 15-18
Month examined	Jul						Total	16	WET	

2011

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	1.79	Wet	3	1	3		Dry = 6-9
2nd	Jun	0.00	0.29	1.57	Wet	3	2	6		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	15	WET	

2011

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	1.57	Wet	3	1	3		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	13	NORMAL	

2011

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	12	NORMAL	

2011

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	1.43	Wet	3	3	9		Wet = 15-18
Month examined	Nov						Total	15	WET	

2011

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	1.43	Wet	3	2	6		Normal = 10-14
most recent	Nov	1.06	3.15	0.93	Dry	1	3	3		Wet = 15-18
Month examined	Dec						Total	11	NORMAL	

2012

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	1.43	Wet	3	1	3		Dry = 6-9
2nd	Nov	1.06	3.15	0.93	Dry	1	2	2		Normal = 10-14
most recent	Dec	1.00	3.54	0.1	Dry	1	3	3		Wet = 15-18
Month examined	Jan						Total	8	DRY	

2012

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	0.93	Dry	1	1	1		Dry = 6-9
2nd	Dec	1.00	3.54	0.1	Dry	1	2	2		Normal = 10-14
most recent	Jan	1.90	4.75	3.55	Normal	2	3	6		Wet = 15-18
Month examined	Feb						Total	9	DRY	

2012

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	0.1	Dry	1	1	1		Dry = 6-9
2nd	Jan	1.90	4.75	3.55	Normal	2	2	4		Normal = 10-14
most recent	Feb	1.33	4.19	0.81	Dry	1	3	3		Wet = 15-18
Month examined	Mar						Total	8	DRY	

2012

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	3.55	Normal	2	1	2		Dry = 6-9
2nd	Feb	1.33	4.19	0.81	Dry	1	2	2		Normal = 10-14
most recent	Mar	1.60	3.90	4.47	Wet	3	3	9		Wet = 15-18
Month examined	Apr						Total	13	NORMAL	

2012

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	0.81	Dry	1	1	1		Dry = 6-9
2nd	Mar	1.60	3.90	4.47	Wet	3	2	6		Normal = 10-14
most recent	Apr	0.52	1.54	2.24	Wet	3	3	9		Wet = 15-18
Month examined	May						Total	16	WET	

2012

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	4.47	Wet	3	1	3		Dry = 6-9
2nd	Apr	0.52	1.54	2.24	Wet	3	2	6		Normal = 10-14
most recent	May	0.07	0.67	0.02	Dry	1	3	3		Wet = 15-18
Month examined	Jun						Total	12	NORMAL	

2012

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	2.24	Wet	3	1	3		Dry = 6-9
2nd	May	0.07	0.67	0.02	Dry	1	2	2		Normal = 10-14
most recent	Jun	0.00	0.29	0	Normal	2	3	6		Wet = 15-18
Month examined	Jul						Total	11	NORMAL	

2012

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	0.02	Dry	1	1	1		Dry = 6-9
2nd	Jun	0.00	0.29	0	Normal	2	2	4		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	11	NORMAL	

2012

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0	Normal	2	1	2		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	12	NORMAL	

2012

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	12	NORMAL	

2012

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	1.07	Normal	2	3	6		Wet = 15-18
Month examined	Nov						Total	12	NORMAL	

2012

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	1.07	Normal	2	2	4		Normal = 10-14
most recent	Nov	1.06	3.15	4.28	Wet	3	3	9		Wet = 15-18
Month examined	Dec						Total	15	WET	

2013

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	1.07	Normal	2	1	2		Dry = 6-9
2nd	Nov	1.06	3.15	4.28	Wet	3	2	6		Normal = 10-14
most recent	Dec	1.00	3.54	4.52	Wet	3	3	9		Wet = 15-18
Month examined	Jan						Total	17	WET	

2013

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	4.28	Wet	3	1	3		Dry = 6-9
2nd	Dec	1.00	3.54	4.52	Wet	3	2	6		Normal = 10-14
most recent	Jan	1.90	4.75	0.94	Dry	1	3	3		Wet = 15-18
Month examined	Feb						Total	12	NORMAL	

2013

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	4.52	Wet	3	1	3		Dry = 6-9
2nd	Jan	1.90	4.75	0.94	Dry	1	2	2		Normal = 10-14
most recent	Feb	1.33	4.19	0.41	Dry	1	3	3		Wet = 15-18
Month examined	Mar						Total	8	DRY	

2013

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	0.94	Dry	1	1	1		Dry = 6-9
2nd	Feb	1.33	4.19	0.41	Dry	1	2	2		Normal = 10-14
most recent	Mar	1.60	3.90	1.46	Dry	1	3	3		Wet = 15-18
Month examined	Apr						Total	6	DRY	

2013

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	0.41	Dry	1	1	1		Dry = 6-9
2nd	Mar	1.60	3.90	1.46	Dry	1	2	2		Normal = 10-14
most recent	Apr	0.52	1.54	0.92	Normal	2	3	6		Wet = 15-18
Month examined	May						Total	9	DRY	

2013

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	1.46	Dry	1	1	1		Dry = 6-9
2nd	Apr	0.52	1.54	0.92	Normal	2	2	4		Normal = 10-14
most recent	May	0.07	0.67	0.13	Normal	2	3	6		Wet = 15-18
Month examined	Jun						Total	11	NORMAL	

2013

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	0.92	Normal	2	1	2		Dry = 6-9
2nd	May	0.07	0.67	0.13	Normal	2	2	4		Normal = 10-14
most recent	Jun	0.00	0.29	0.58	Wet	3	3	9		Wet = 15-18
Month examined	Jul						Total	15	WET	

2013

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	0.13	Normal	2	1	2		Dry = 6-9
2nd	Jun	0.00	0.29	0.58	Wet	3	2	6		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	14	NORMAL	

2013

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0.58	Wet	3	1	3		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	13	NORMAL	

2013

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0.67	Wet	3	3	9		Wet = 15-18
Month examined	Oct						Total	15	WET	

2013

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0.67	Wet	3	2	6		Normal = 10-14
most recent	Oct	0.44	1.39	0	Dry	1	3	3		Wet = 15-18
Month examined	Nov						Total	11	NORMAL	

2013

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0.67	Wet	3	1	3		Dry = 6-9
2nd	Oct	0.44	1.39	0	Dry	1	2	2		Normal = 10-14
most recent	Nov	1.06	3.15	1.28	Normal	2	3	6		Wet = 15-18
Month examined	Dec						Total	11	NORMAL	

2014

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	0	Dry	1	1	1		Dry = 6-9
2nd	Nov	1.06	3.15	1.28	Normal	2	2	4		Normal = 10-14
most recent	Dec	1.00	3.54	0.02	Dry	1	3	3		Wet = 15-18
Month examined	Jan						Total	8	DRY	

2014

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	1.28	Normal	2	1	2		Dry = 6-9
2nd	Dec	1.00	3.54	0.02	Dry	1	2	2		Normal = 10-14
most recent	Jan	1.90	4.75	0.31	Dry	1	3	3		Wet = 15-18
Month examined	Feb						Total	7	DRY	

2014

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	0.02	Dry	1	1	1		Dry = 6-9
2nd	Jan	1.90	4.75	0.31	Dry	1	2	2		Normal = 10-14
most recent	Feb	1.33	4.19	3.98	Normal	2	3	6		Wet = 15-18
Month examined	Mar						Total	9	DRY	

2014

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	0.31	Dry	1	1	1		Dry = 6-9
2nd	Feb	1.33	4.19	3.98	Normal	2	2	4		Normal = 10-14
most recent	Mar	1.60	3.90	2.34	Normal	2	3	6		Wet = 15-18
Month examined	Apr						Total	11	NORMAL	

2014

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Feb	1.33	4.19	3.98	Normal	2	1	2		Dry = 6-9
2nd	Mar	1.60	3.90	2.34	Normal	2	2	4		Normal = 10-14
most recent	Apr	0.52	1.54	1.32	Normal	2	3	6		Wet = 15-18
Month examined	May						Total	12	NORMAL	

2014

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Mar	1.60	3.90	2.34	Normal	2	1	2		Dry = 6-9
2nd	Apr	0.52	1.54	1.32	Normal	2	2	4		Normal = 10-14
most recent	May	0.07	0.67	0.2	Normal	2	3	6		Wet = 15-18
Month examined	Jun						Total	12	NORMAL	

2014

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Apr	0.52	1.54	1.32	Normal	2	1	2		Dry = 6-9
2nd	May	0.07	0.67	0.2	Normal	2	2	4		Normal = 10-14
most recent	Jun	0.00	0.29	0	Normal	2	3	6		Wet = 15-18
Month examined	Jul						Total	12	NORMAL	

2014

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	May	0.07	0.67	0.2	Normal	2	1	2		Dry = 6-9
2nd	Jun	0.00	0.29	0	Normal	2	2	4		Normal = 10-14
most recent	Jul	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Aug						Total	12	NORMAL	

2014

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jun	0.00	0.29	0	Normal	2	1	2		Dry = 6-9
2nd	Jul	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Aug	0.00	0.00	0	Normal	2	3	6		Wet = 15-18
Month examined	Sep						Total	12	NORMAL	

2014

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jul	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Aug	0.00	0.00	0	Normal	2	2	4		Normal = 10-14
most recent	Sep	0.00	0.45	0.34	Normal	2	3	6		Wet = 15-18
Month examined	Oct						Total	12	NORMAL	

2014

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Aug	0.00	0.00	0	Normal	2	1	2		Dry = 6-9
2nd	Sep	0.00	0.45	0.34	Normal	2	2	4		Normal = 10-14
most recent	Oct	0.44	1.39	0.1	Dry	1	3	3		Wet = 15-18
Month examined	Nov						Total	9	DRY	

2014

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Sep	0.00	0.45	0.34	Normal	2	1	2		Dry = 6-9
2nd	Oct	0.44	1.39	0.1	Dry	1	2	2		Normal = 10-14
most recent	Nov	1.06	3.15	1.25	Normal	2	3	6		Wet = 15-18
Month examined	Dec						Total	10	NORMAL	

2015

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Oct	0.44	1.39	0.1	Dry	1	1	1		Dry = 6-9
2nd	Nov	1.06	3.15	1.25	Normal	2	2	4		Normal = 10-14
most recent	Dec	1.00	3.54	9.51	Wet	3	3	9		Wet = 15-18
Month examined	Jan						Total	14	NORMAL	

2015

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Nov	1.06	3.15	1.25	Normal	2	1	2		Dry = 6-9
2nd	Dec	1.00	3.54	9.51	Wet	3	2	6		Normal = 10-14
most recent	Jan	1.90	4.75	0.12	Dry	1	3	3		Wet = 15-18
Month examined	Feb						Total	11	NORMAL	

2015

Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Dec	1.00	3.54	9.51	Wet	3	1	3		Dry = 6-9
2nd	Jan	1.90	4.75	0.12	Dry	1	2	2		Normal = 10-14
most recent	Feb	1.33	4.19	2.23	Normal	2	3	6		Wet = 15-18
Month examined	Mar						Total	11	NORMAL	

2015										
Prior Month	Name	WETS 30th percentile	WETS 70th percentile	Measured Rainfall	Condition	Condition Value	Month Weight	Score	Result	
3rd	Jan	1.90	4.75	0.12	Dry	1	1	1		Dry = 6-9
2nd	Feb	1.33	4.19	2.23	Normal	2	2	4		Normal = 10-14
most recent	Mar	1.39	3.84		Dry	1	3	3		Wet = 15-18
Month examined	Apr						Total	8	DRY	

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14. ABSTRACT The following report provides a framework for evaluating areas with potential wetland hydrology in irrigated and formerly irrigated croplands. The document is designed to provide insight into the complexity of identifying irrigated wetlands and to support current U.S. Army Corps of Engineers (USACE) guidance. Additionally, the analysis conducted helps to identify and refine areas that can be targeted for future investigation, including the installation of on-site groundwater monitoring equipment. The information herein supports and supplements current approaches and is not intended to replace or supersede current USACE national, division, or district level guidance for making wetland determinations in irrigated croplands. The procedures in this document should not be the sole basis for making wetland determinations for the purposes of the Clean Water Act; rather, these procedures are intended to supplement existing guidance and provide supporting information for making wetland determinations.					
15. SUBJECT TERMS Aerial image interpretation Identifying irrigated wetlands			Potential wetland hydrology Rainfall normality analysis		
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